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THE MICHIGAN FARMER,

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JOHNSTONE & DUNCKLEE.

Contents.

Flax and its Culture.

In a former number of the *Farmer*, we called attention to a letter which had been written by the agent of the American Flax Manufacturing Company to the Governor of the State of Indiana, stating how very willingly the Company would avail itself of any opportunity to purchase flax fibre, and inviting attention to the ease with which it could be cultivated on a large portion of the western lands, and how profitable the crop must be for a number of years to come, as the demand was now much larger than the supply, and that demand promised to increase in the same ratio as the population of the country. These facts we thought worthy of the notice of the farmers of Michigan, and therefore called their attention to them, with the hope that, if any had made trials to grow the crop in this state, either for its seed or its fibre, and as a source of pecuniary profit, they would give the public the benefit of their experience, and the results, whether successful or otherwise.

One communication reached us last month, which we published, but that did not give the experience of the writer in this state, and while we assented readily to his assertions that two such exhausting crops as that of wheat *for its grain*, and flax *for its seed*, should not follow each other under any circumstances, we doubted, judging from the experience of others, that flax grown for its fibre was such an exhausting crop, that farmers should shun its cultivation as much as they would that of the Canada thistle.

In this article only the two following questions will be considered, in relation to this crop, viz:

1. What kind of a soil is needed for the profitable growth of the flax plant for fibre and for seed?

2. Can its cultivation be made to enter into a system of rotation suitable for this state?

The soil suitable for flax is generally recommended to be of a loamy nature, slightly inclined to sand. Stiff clays, or dry gravel, are neither of them suitable for flax. Stephens, in his *Farmer's*

Guide, says, "The flax plant requires a deep, mellow, loamy soil, abounding in vegetable matter, and equally removed from a strong clay and a thin gravel. On the former, the plant would grow too strong and branchy, yielding a coarse fibre, and on the latter the crop would be too scanty." A later writer, equally reliable, speaking of the culture of the flax plant in Flanders, says, "He who pays attention to every detail, and knows how to properly manure his ground, will obtain good flax from all soils, if the situation be not too wet, or too dry." Flax must not stand deep, nor wet, nor cold, but requires a soft, warm, well loosened ground to reach its full growth. An American writer, describing the cultivation of the flax plant in Ohio, where it is grown principally for its seed, says "it requires a rich soil, one that is calculated to produce an abundant yield of straw; and the subsoil, within from eight to twelve inches of the surface, should be clay." Mr. Edmundson, of Iowa, says, "Flax may be successfully grown upon land that will yield heavy crops of barley or oats. The soil should be rich, deep and mellow; and the subsoil, if clay, should be permeable, by which the roots will extend to a great depth." The character of the soil suited for the growth of flax is that of a large portion of the lands throughout the cultivated parts of this state. It may be conceded, therefore, that so far as quality of soil is concerned, there is no difficulty to be encountered.

To exhibit more perfectly how near a good flax soil and a good wheat soil come to each other in their constituents, as developed by chemical analysis, the following table will show the component parts of one of the best soils known in Ireland for the constant growth of the finest kind of flax, considered in the market equal to the finest Belgian, and the constituents of a soil from the Genesee wheat country, of the state of New York:

	FLAX SOIL.	WHEAT SOIL.
Silica and siliceous sand	73 72	80.18
Oxide of iron	5.51	
Alumina	6.05	
Per oxide of iron and alumina		6 40
Phosphate of iron	.16	
Phosphate of lime		0.12
Carbonate of lime	1.09	0.40
Magnesia and alkalies	.32	0 28
Organic matters	4 86	5.92
Water	7.57	5.70
	99.78	99 00

These figures, though made by very different men, show a great similitude in the character of the compounds of soils separated by great distances from each other. Any good wheat soil will grow flax, and some have even argued, that where the flax is grown principally for its fibre, it is the most beneficial of crops to take the place of the summer fallow, as it has such a tendency to clean the land of all weeds, and by the action of its long, penetrating roots, it divides, separates and loosens the soil, particularly if the subsoil happens to be of a clayey nature. In Britain, flax is usually sown after turnips, or barley, giving the land a plowing in the fall, and a plowing in the spring. Here it has been sown with considerable success upon an Indian corn stubble, to which manure had been strongly applied the previous year. Manure ought not to be applied to the soil the same season that flax is sown. When applied to either a potato crop or a corn crop the year before, manure has been generally found the most serviceable.

The land which it is intended to sow with flax should have a good thorough plowing to the depth of seven or eight inches in the fall; and in the spring it ought likewise to be thoroughly plowed, harrowed and rolled previous to the reception of the seed.—Few crops, it must be recollected, pay better than this one; but at the same time few require more labor, and if fine flax is to be grown, good cultivation is of the utmost importance. Meadow or good pasture lands from which only one crop of grain has been taken may be sown with flax, if thoroughly tilled as above. Having got the land in order, the next question is what quantities of seed shall be sown? The answer to this query depends very much upon whether it is the intention of the grower to raise a crop of fibre, or a crop of flax-seed.—If the design is to raise as much of the best quality of fibre as possible without reference to the seed, we do not find that any one recommends less than two bushels to the acre. When it is wished to grow very fine fibre, as high as three and even three and a half bushels are sown. The reason of such a quantity being used, is because it is well known no flax is produced on that part of the plant above where it begins to branch out; and where it is grown thickly and luxuriantly there is less tendency to run to seed; for the little seed bolls are all produced at the end of the branches. The seed sown should not be older than one year, and the fresher and newer it is so much the better. The Russian or Riga flax-seed is recommended as the best, and it is preferred in those countries, such as Belgium and Ireland, where the utmost care is bestowed upon the crop—the farmers and flax-growers there preferring it to the seed they raise themselves, as being cleaner, and producing a better quality of fibre. After flax is once sown, the whole labor necessary for its cultivation is to keep it clean and free from weeds, which are to be pulled by hand as soon as they show themselves among the crop, and can be distinguished. In relation to the after labor which the flax crop requires, we shall have something to say on the subject in a future number, and will now turn to the consideration of the important question, Can flax be made to enter into a rotation of crops with profit to the farmer?

In answering this question, it must be rememberd what the paying crops of the Michigan farmer are. Among the principal ones wheat, Indian corn, oats,

timothy hay, clover, and pasture for sheep and cattle rank first. There are others which might be mentioned, but these are the staples from which the farmer expects to derive his cash profits. In commencing a course of rotation, the farmer must him elf be the judge, after he has taken into consideration the capacities and qualities of his soil, his position with respect to market, and his means of carrying out his plans, what series of crops he will adopt.

To show how flax may be introduced with profit into a system of rotation where a farm is properly divided, the following rotations are suggested, which we are very sure, if properly carried out, will leave a soil of ordinary fertility, in better condition at the end of their term of years than it was in when first broken up.

Rotation 1.	Rotation 2.
1st year, Corn on the sod, manured.	Potatoes or corn on the sod, manured
2d do Flax for the fibre	Flax for the fibre
3d do Wheat	Wheat
4th do Clover	Clover
5th do Wheat	Wheat seeded
6th do Oats or barley seeded	Grass for hay
7th do Grass for hay	do pasture
8th do Grass, hay or pasture	do broken up.
9th do Grass do do and broken up.	

Where the land is not strong enough to stand two crops of wheat, or where it is desirable to shorten the interval between the times of breaking up, the following may be made the series of crops:

Rotation 3.	Rotation 4.
1st year, Corn on the sod manured.	1st year, Corn
2d do Flax	2d do Flax
3d do Wheat seeded down	3d do Rye and clover seed
4th do Grass for hay	4th do Clover
5th do Grass for hay	5th do Wheat seeded down
6th do Grass for pasture and sod broken up.	6th do Grass
	7th do Grass
	8th do Grass and broken up.

It will be noticed that in each of these rotations flax would invariably succeed a hoed crop, that it would be the second crop after the breaking up of the sod and the application of manure, and that wheat comes immediately after it. This is suggested by the nature of the flax crop, which should be sown on ground thoroughly clean and free from weeds, which is secured by the cultivation that ought to be given to either a corn or a potato crop; while it also secures to the flax crop the use of the manure, which must be applied to the soil at least one year previous to the growth of flax; for fresh manure makes the fibre coarse, and not so valuable. Flax also needs a deep soil, and in the breaking up of the sod the subsoil plow can be used by which the land may be made mellow to a great depth, say twelve to fourteen inches. If wheat is grown after the flax, and the ground has been properly prepared, we feel confident that an excellent crop may be secured in ordinary seasons. If the land is not strong enough to bear the course of two wheat crops and one of flax with a crop of clover intervening, rotations 3 and 4 show how in the course one good crop of wheat may be secured. This course besides gives ample opportunity to raise stock of all kinds to any amount, that the farm will bear. The corn, potatoes, hay and straw with the refuse of the flax crop, will give ample winter feed and litter for the preparation of manure; and the cash realized from the saleable grains will amount to as much in the aggregate at the end of the term, as from any system which can be recommended: it gives plenty of pasture for sheep, or cattle; and as there are on almost all farms pieces of ground that have to be kept in grass, as they cost too much to break up, or may be naturally too wet, to grow any thing but grass, with either of the above rotations for those parts of the farm which may be arable, there can be no denial, that the paying crops, such as wheat, corn, wool, pork, may be all realized from it, while full crops of hay are secured.

In relation to its profits we shall have something to say also in a future number. In the meanwhile let the readers of the *Farmer* give us their opinions as to the correctness of the position which we have assumed, to wit, that flax can be made to enter into a profitable rotation of crops suitable for cultivation in this State. We are not wedded to our opinions on this subject; but if they are incorrect, let us hear why they are so. A crop from which a cash profit may be obtained of 30 to 40 dollars per acre after paying all expenses, is worth learning all about; and ought to have a fair trial.

Clover Chaff vs. Cleaned Seed.

Mr. Editor:—I have felt disposed for some time to say a few words against the almost universal practice of cleaning clover seed, but have been deterred from so doing by the knowledge of the almost universal practice and prejudice in its favor.

It is no longer a matter of doubt with any practical farmer that wheat threshed with a machine is seriously injured *for seed.* This I think is conceded on all hands. Now if wheat is thus injured, what must be the effect produced upon clover seed that has been subjected to an assault and battery much greater. To my mind it is nearly reduced to a certainty that at least one quarter of the seed has its vitality destroyed. But, as the lawyers say, "to the facts in the case."

In the spring of 1850, wishing to sow some six bushels clean clover seed according to *the book*, I wet the seed in a tub, half a bushel at a time, and dried with plaster. In stirring the seed to equalize the moisture, I found my hand literally covered with seed that would not shake off; upon examination with a magnifying glass I discovered they were half seeds, or in other words, clover seeds split in two and nothing else. Now I had an opportunity to study the *anatomy* of the seed; it was dissected ready at at my hand ....

Here was a new page in nature, (no I will not say nature, for nature does not tear clover seed in that

manner,) a new leaf turned over, to me at least; and I had not studied it many minutes before I arrived at the sage conclusion that "there are things in heaven and earth than are not dreamed of by my philosophy."

Clover seed is not like timothy, turnip, mustard, or cabbage, a solid seed; but like a white bean composed of two parts or halves held together by a slight epidermis very easily ruptured, particularly by a *clover machine grater.*

Well, Mr. Editor, did I hastily jump at a conclusion, after making that examination, when I involuntarily exclaimed, "Ah, that's it! that explains it now, why we have such luck and can't make clover catch good; that's why we find it necessary to sow 10 or 12 pounds to the acre, in order that the stools be sufficiently near to be neighbors."

That velvet covering in which the seed is enveloped is admirably adapted to protect it from injury, aid in germinating, and materially assist it in withstanding drouth.

It was asserted in 1840 by Dr. C. S. Button of Newark, Wayne Co., N. Y., a practical farmer and close observer of the "wonders of nature," that clover sown in the chaff, side by side in the same lot with cleaned seed, would survive a drouth 21 days after the clean seed had perished.

Somebody has said "a word to the wise is sufficient," which is true, or it is not; if true, then are there but few wise in the world; if not true, then a word to the wise is not sufficient.

SHARON, Washtenaw Co., Feb. 20, 1851. A. R.

Practical Hints about Poultry.

At the present time the subject of poultry is attracting a large share of public attention. The "hen fever" prevails extensively. Public exhibitions are taking place in different places, and accounts of sales at most extravagant prices are published.

Whether the large-sized varieties of fowls which are "all the rage" now amongst fancy breeders and dealers, are really preferable to the old-fashioned barn-yard fowls, is a subject on which there are two opinions among those who have tried both. To say nothing of the enormous prices which they occasionally command—when fools can be found to pay such prices—they weigh heavily in the market scales, or fill a large platter on the dining table. But on the other hand, they are great gormandizers themselves, and the chickens are generally considered difficult to raise.

But it is not our purpose now to enter upon a comparison of the different varieties of fowls, so much as to throw out a few hints which may be of value to keepers of any and every variety.

In the first place, roosters should be changed as often as once in two years, if not annually; and pains should be taken in replacing them, to procure strong, healthy, and perfect birds. The hens will lay better and hatch more chickens.

Secondly, but a small number of hens should be kept in one house, or together. We have known repeated instances in which keepers of poultry have become disgusted at their failure to lay, and have determined to kill them off. They have commenced reducing the number, which was, perhaps, forty or fifty, and, when they got down to half a dozen, were surprised to find every one of the hens laying, and the supply of eggs for the family better than the whole furnished.

As to profit, we doubt very much whether, if all their food be bought, the eggs and chickens produced by any breed, and sold at the regular market prices, for the table, will pay the expense of keeping. But it by no means follows from this, that hens are not a source of profit on a farm. They eat much which would otherwise be entirely lost and wasted. And a small patch of buckwheat, sown at a trifling cost, and left on the ground where they can stroll over it, and feed at their pleasure, will keep them as fat as butter.

But the main and most important point to which we wish to call attention in connection with this subject, is the great value of the manure of poultry. The hen-roost is the place where most farmers should go for their guano. If obtained there, it will invariably prove of good quality. There need be no fear, by those who get their guano from this source, that it will turn out to be of a spurious importation or of an inferior kind. Then, there are no heavy bills to pay for it. The bills of the hens every farmer can provide for, but the bills of the guano dealers not every one is prepared to meet. And we doubt whether even intelligent farmers who have not tried it, would estimate at more than one-hundredth part of its actual amount, the quantity of excellent manure which can be made, in this way, in the course of the year.

The hen roost—duck roost—goose roost—and turkey roost—should be supplied with several loads of peat, swamp muck, or loam, spread evenly over the surface of the floor, and on this there should be scattered a thin layer of sand or gravel. Rainy days, when the work can be done as well as not—and as often as practicable—this should be all shovelled over, and the manure thus mixed with the other ingredients. The compost soon becomes strong, when it can be removed, and a fresh supply of the most suitable material convenient to be obtained, be thrown in.

The house is thus kept sweet and clean, and healthy for the fowls; and if any farmer will adopt this plan, and practice it faithfully for five years, and keep an accurate account, not only of the crops raised directly from the compost made with the

poultry manure, but from the manure made by feeding those crops out in their turn, he will be amazed at the result; first, in the amount of cash which he will have realized, and secondly, in the effect, in the way of permanent improvement of his farm.—*Ex.*

Plows and Plowing.

The season has again come round when the first and most important operation on the farm must be commenced. If there is any work which requires to be well and faithfully done, it is that to be done by the plow. Just so sure as the work done by this implement is performed in a slovenly manner, just so sure you may expect an uneven crop, with the grain growing light, thin and scanty, in spots; and when the ground is seeded down, not only is the grass land hummocky and full of places where the "seed did not take;" but when the mower comes to pass over it with his scythe, it is so far from being a smooth level that he cannot cut the crop even and close without getting his point in the ground much oftener than he would like to own. Of course, in plowing newly cleared ground where stumps are as numerous as the trees had been previously, no one expects to leave the long evenly turned furrow, with each furrow slice leaning over just so far, and resting on its next neighbor without a spear of grass or the sign of a weed showing itself above the ground. That sort of plowing can only be done when the land is perfectly cleared, and where all obstacles to the uninterrupted progress of the plow from one end of the field to another have been removed. Yet even where some of the old stagers remain, hard and stubborn as ever, the work of the plow as it passes around them may be done so that it will have the effect of allowing them as little room as possible, and also of causing them to rot and decay more quickly. Even this may be thought of but little account; but if any one who knows something of the value of land and work, will calculate that for every stump he loses not only the use of at least one square yard of ground but also all the seed and labor which that square yard makes no return for, but which is expended upon it, he will easily learn that in a field of ten acres, where there are but twenty of these stumps to an acre, he has to submit to the loss entailed by them of 200 square yards each year. But the mere loss caused by stumps in the work of plowing is not what is under consideration. It is the mode in which plowing should be done, and the reasons why strict attention should be paid to it, whether the land is intended either for corn, potatoes or any other crop.

The principle objects of plowing land, to prepare it for growing crops, are to loosen the soil, to expose it to the decomposing effects of the air, to render it light, so that the roots of plants may permeate into every part of it in search of sustenance, and that the area may be as extended as possible from which the plants may draw their required nourishment; to make the soil porous so that the rains may fertilize it, and pass through it with ease; and another object of plowing is to incorporate with the soil, the manure with which it is sought to be enriched. In greensward, the design of the plowman is to bury all the growth of grass or clover that may be upon the surface, so that it will decay as speedily as possible. Where stubble is plowed in, the object is to bury it, and to leave a surface, as smooth and friable as possible for the harrow. It will be admitted, therefore, that there is something more to be done by the plow, than merely to turn over so many acres of land within a given time.

The recent improvements in the structure and form of the plow by those interested in their manufacture in the United States, render it easy for every farmer to have the very best implements of the plow kind in the world. There is no need now to be troubled with a plow, that requires almost as much strength to keep it in the furrow, or in a straight line, as there is necessary to draw it through the soil; and after which it was found always necessary to have one of "the boys" to follow to make the furrow slice "stay put," and not fall back into the trench out of which it had just been raised. No—now plows may be obtained which will almost run alone if they have a good steady team in front of them; and which will lap a furrow from one end of the field to the other without making a break in its whole length, though it should extend for miles. With such implements, it is easy doing the right kind of work now, compared with what it was some years ago, when the west was only supplied with the patterns which had grown out of date in more favored localities.

Another of the objects of plowing besides those enumerated, is the deepening of the soil. As a general rule among the farmers of this State, deep plowing is beginning to be considered of the greatest importance. The "skinning" process is falling more and more into disrepute with intelligent men every day; when we know that the roots of corn have been known to reach a depth of six feet, where the soil was in a condition to allow them to descend, and the roots of the wheat plant have been found penetrating to full twenty-four inches under favorable circumstances; when it is brought to mind how much additional soil, and what an increased amount of nourishment, a depth of either one or two inches added to a soil naturally but five to six inches, or it may be as we have frequently seen it, but three to four inches in depth, the advantages of deep plowing must be at once admitted, especially where we are so apt to suffer from drought, as is the case in this State.

It is in this respect that the subsoil plow may be considered in the highest degree beneficial. Every one who has turned up the soil will have noted that when he first begun to put his plow in a little deeper than the three or four inches which had been the usual depth, that the subsoil was yellowish or grayish in color, and coarse in appearance—if a clayey ground, it was tough, sticky and hard to break up not at all friable under the harrow, but breaking into great lumps, that were liable to bake in the sun—if in sandy or loamy land, the subsoil came up yellow, and cold, with but little appearance of life or fertility in it; and not till they had time to bleach, and feel the effects of the atmosphere, did either the clay or the sand give evidence of becoming of service to the farmer. Now the subsoil plow helps the farmer in this respect very much; for by loosening, and breaking up the cold hard pan underneath the regular soil, and letting the air, the rain, and the roots of plants down into it to decompose such particles of it as may be susceptible to their action, it prepares a portion of the cold, infertile, and hitherto undisturbed subsoil to be brought to the surface without injury to the crop which may be planted upon it. The subsoil plow it must be recollected is a different acting implement from the Michigan plow with which we find many of our readers confound it, as we learn by some of the letters sent to us for information on the subject. The subsoil plow disturbs and breaks up the earth or sand, or clay which the plow has just slid over and impacted harder than it was before, without bringing a particle of it to the surface. Where, as is the case in most fields, and on most farms, except in a few instances in which particular pains are taken, the depth usually plowed is but six to seven inches, in the breaking up of the sod; a depth of two or three inches added by the use of the subsoil plow will generally repay the man who uses it in the first season's crop, especially if that crop be corn, and there should happen to be a drouth. In the rotation that will follow, after the breaking up of the sod, and on crops of grain, grass or roots, which are grown where the subsoil plow has been used, we have never heard of but one opinion, and that was always in its favor. It is frequently the case that the subsoil plow is used to stir the ground to the depth of seven to eight or nine inches, and thus make a depth of loosened soil of fourteen to fifteen inches instead of the mere seven or eight inches which it has been usual to give crops. There are two or more kinds of subsoil plows in use, and for sale. Those kept at the warehouses are generally of Ruggles, Nourse & Mason's make, and cost about $9,00 each. They are fashioned after the pattern invented by Smith of Deanstone in England. The same firm have recently begun to manufacture one invented by Professor J. J. Mapes of New Jersey, which is noticed as an implement of great strength not liable to get out of order, and as doing the work required of it with less draught, than most others. These are its claims, how far they are correct, cannot as yet be said till some practical men take hold of it and give it a fair trial. Subsoiling in this climate is yet in its infancy, and deserves to be tested We believe, from what we have observed of this climate, that it would prove a corrective of the bad effects of the dry weather from which the crops, and especially the spring ones, generally suffer severely. In preparing ground for orchards the subsoil plow is almost indispensable unless the orchardist resorts to trench plowing as a substitute.

In the regular spring plowing, whether breaking up sod or grass land, or plowing under stubble, it cannot be impressed too strongly on the workman that he should do his work neatly and thoroughly; that his furrows should all be of one width, and all turned at an even and regular angle; that every particle of manure, straw, weeds, grass, &c. should be turned under, and be completely out of sight, and if possible out of the reach of the harrow teeth; and that the head-lands should be handsomely finished up. There are few things that give a farm a more slovenly appearance than a badly plowed field where the head-lands are left without being finished as if they were not as much a part of the land as any other portion of it. Where water furrows are struck, let them be straight as a bee line, and at regular distances from each other. And be sure in doing your work with the plow, to remember the old saying, that if a thing is worth doing at all, it is worth doing well, and that there is no kind of work to which it applies more forcibly than to that done by the plow.

A First rate Mode of Growing the Potato.

Here is cheap and improved method of cultivating the potato which will insure a prolific and healthy product in a good soil, if the following directions are carefully observed.

Plough your ground 7 or 8 inches deep a few days before you wish to plant your potatoes, drag it well with the harrow, then strike it off with furrows 3½ feet between center, five inches deep; cross those furrows with any implement suited to make a mark so as to trace it for dropping the seed crosswise the furrow. Let these marks be 2½ feet apart. You then have your ground laid off in straight rows each way. Being then prepared for the seed, should you wish large potatoes with few small ones, plant in each place not more than half a large potato; if middle sized, one whole; if very small, two; but if you wish an abundant crop without regard to size, use more seed, when you will have an aggregate of greater weight. Your ground being thus prepared and your seed ready for covering, cover light, say a

little heavier than you would corn, and when the germ is near piercing the surface take your plough and turn a ridge over the plant, letting your plough in as deep as the first ploughing. Be sure to close the furrows over the plant, and should any defect appear mend it with the hoe.

Now let it lie until the stalk rises above the surface 4 or 5 inches, then take a shovel plough and cross the first, and let it in as deep as the first if that can be done without covering the plant.

Nothing more is required only to take your hoe and round the hills, as you will find them square in that condition, and except the ground be uncommonly foul, you will have little more to do unless it be to pull some weeds in the latter part of the season. J. B.

Portage, Kal .Co, Feb. 1854.

True and only Remedy for the Potato Rot.

Messrs. Editors:—Many abortive attempts having been made to explain the cause and point out a remedy for the degeneration and diseased condition of our principal vegetable, the potato, I cannot forbear giving your readers my opinion on the subject. But my ideas coincide so completely with those of a writer who recently read before the Kilkenny Literary and Scientific Institution a paper entitled "Remarks on the Potato Plant," that I cannot do better than to lay before your readers the substance of his argument, and bespeak for his theory a careful and impartial trial. He explains not only what appears to me the source of the disease, but points out a remedy which is in harmony with one of the most widely diffused laws of nature and in beautiful analogy with the principles of reproduction and recuperation of vital energy in the amimal and vegetable world.

The writer sets forth with the position that the potato plant is an annual, empowered with only two modes of reproduction; the one like the oak tree living for years only, the other like the acorn living forever.

Both reproductions are deposits from the plant, different in chemical properties, living and dying independent of each other, with the plant providing for, but independent of both. The tubers at the bottom of the stalk are analogous to the tree which after a time becomes aged and ceases bearing. The seeds in the potato apple are analogous to the acorn which possesses a perpetual power of reproduction.

The potato exhibits a graduate scale of ascending and descending life; and the author has discovered that the plant exists for thirty-four years in three states of being. First as an ascending germ from the seed which blossoms for five years without producing apples; next a potato with apples for nineteen years; and lastly in the descending scale a potato without apples for ten years during which interval the plant is becoming more and more effete and incapable of giving nutriment to man until it dies out altogether. To illustrate this scale, the writer gives the history of the Lumper potato. It was known in 1818; from 1825 to 1835 it was so charged with vitality that it would grow without manure in any soil, of large size and produced 160 barrels to the acre. The Lumper now produces only 40 barrels per acre and has ceased bearing apples. It will soon die out altogether. It is the same with most of the varieties which once reigned supreme in their day. An important and essential element in the cultivation of this plant has been neglected, and we are fain to attribute to an epizotic disease, or to electricity or to the potato fly, or to anything, the calamity which is the natural result of our ignorance and a contemptuous defiance of the laws of nature. The writer maintains that the seed supplied by the potato plant at its longest period of vitality in the ground, that is from its fifth to its tenth year, must of necessity be the best and strongest. It then continues green from five to seven months in proportion to its age. In its nineteenth year it remains green only for five months, and produces no seed. The descending germ of the tenth year remains green only three months, and with little produce. The statement of the evil practice of neglecting to secure good seed from the apple at the proper stage demonstrates the mode of regaining and securing the vitality of the plant. By the cultivation of the germ season after season, and apple after apple, a potato can be produced, if the writer's theory be correct, so strong as to be able to resist any climate. What is in reality the incomprehensible potato disease, arises from the inability of the plants in the debility of old age to perfect their fruits, so that when they die the fruit not being ripe continues to absorb the decomposing, putrifying matter in the leaves and vessels until these vessels close.

Now, gentlemen, give us your opinion. Shall we descant upon the diseases, decrepitude and unproductiveness of aged cattle, horses, sheep, and potatoes, and tenaciously retain them and endeavor to seek out a remedy for their debility; or shall we, in the one case as we do in the other raise up a new and vigorous generation to supply the place of the superannuated?

For myself, having been for some time fully convinced of the truth of this theory, I have been reducing it to practice, and have as yet no reason to change my views on the subject; and I am confident in the opinion that the time is not far distant when 400 bushels to the acre can be realized as easily as 100 now are, and free from disease. This result may not be fully obtained from the first

generation from the seed, but I intend to propagate from the apples of seedlings as fast as they commence bearing and thus test the matter thoroughly. I have now on hand 80 bushels of seedlings two years from the seed, and 24 bushels five years old, and a few year's sowing and a small quantity of seed from the apples of seedlings.—What I do not sell at a remunerative price I intend to plant, but there is considerable of a demand, as people in this vicinity are becoming aroused on the subject. A SUBSCRIBER.

MARENGO, Feb 7th 1854.

Salt will kill Sheep.

It is said that bought wit is best if not purchased too dear. I have bought a little at a high price, and with your permission, Mr. Editor, will give your readers an account of the purchase.

In the month of August last I bought a yearling buck which was said to be a cross between the Spanish and French Merinos of the flock of the celebrated sheep breeder Mr. Patterson, of New York. I paid twenty-five dollars for him. He was turned into a field with some lambs that were being weaned. A few days afterwards I went out and gave each a handful of salt; the lambs not being used to eating it, got but little, while the buck devoured it greedily. I found him in the afternoon near the place of feeding, in great distress. He had lost the use of his legs and the proper control of his head, at the same time discharging from his mouth and nostrils fermented grass smelling very offensive. I had never seen a sheep in that situation before, neither had I ever known of salt injuring sheep, yet I suspected that was the case now. As I knew of no remedy, I stepped over to a neighbor's and made known my trouble. He thought the difficulty was caused by the salt, and stated that in the last number of the "Wool Grower" a correspondent gave an account of losing a number in the same way. We came back and gave the buck a dose of castor oil, but he died immediately. Well, some may say, a fool and his money are soon parted, but I know I have made money by purchasing good bucks and thus improving my stock.

My object, Mr. Editor, is not to display my talents as a writer, for you see I have none, yet I feel it a duty to acquaint my brother farmers with my misfortune, that they may profit by it. I hope they will do me the same kindness. This misfortune was through ignorance; for though I was, as it were, brought up among sheep, and have long had the care of them, I never knew that salt would kill them. To some of your readers this fact has doubtless been known, yet it has not been made public. I have been a reader of the *Farmer* from its infancy and have never seen a word on the subject.—Now I hold that we should do all the good we can in this world, and if this article should benefit any one of your numerous readers I shall be abundantly repaid for writing it.

I see in the last number of the *Farmer*, that among your many able correspondents there is one of the medical faculty who says his business is to deal in pills and powders; now if he will be so kind as to prescribe a dose that will counteract the effects of too much salt in the stomach of a sheep, he will have the thanks of many farmers and the satisfaction of knowing that he has done some good in the world. We get plenty of recipes for making cakes and puddings, but very few for the relief of poor dumb brutes in case of sickness or accidents among them. It would add much to the value and interest of the *Farmer* if it would instruct us more in these things. You will bear in mind that very many of your readers live in the backwoods, and have not access to books treating on such subjects; consequently you will see the necessity of dealing out such information to us as we are likely to need.—When our beasts are sick we look to the *Farmer* for a remedy and feel disappointed if we find none. We see the benefit of taking a paper containing the experience of many. We often get information in this way that we can get no where else. I have gathered much valuable knowledge from the *Farmer*, and would not be without it for five times its cost.

If this should find its way into some corner of your paper you may hear from me again,

UNADILLA, Livingston Co. Feb. 1854. D. D. BIRD.

[The article to which Mr. B. alludes is in the July number of the Wool Grower, but he will observe it was not simply giving salt, but an *over-dose*, that killed the sheep. In the same number we find the following from a correspondent:

"Salt, in my judgment, is indispensable to the health of sheep, particularly in the summer—and I know not a flock-master among the hundreds, nay, thousands with whom I am acquainted, who differs with me in this opinion. It is common to give it once a week while the sheep are at grass. It is still better to give them free access to salt at all times, by keeping it in a covered box, open on one side.

A large, hollow log, with holes cut along the side for the insertion of the heads of the sheep, will make a respectable substitute. A sheep having free access to salt at all times, will never eat too much, and it will take its supply when and in what quantities nature demands, instead of eating voraciously at stated periods, as intermediate abstinence will stimulate it to do. When fed but once a week, it is better to have a stated day so that it will not be forgotten; and it is well to lay the salt on flat stones, though if laid in little handfulls on the grass very little will be lost."

In the December number of the same work is the following advice from S. B. Rockwell of Vermont:

"SALT IN WINTER.—Place a box in the shed, in a secure place, where only one sheep can approach it at a time. Fill this with six or eight quarts of salt and it will be found that the flock will partake

of it in such quantities, and at such times as nature directs When the box is emptied, fill again."

Also, N. B. Clapp, of Wisconsin, makes these remarks in his article on the management of sheep.

"I keep salt and ashes mixed—one part ashes, two parts salt—in a trough under shelter, where they can have free access to it. I formerly salted my hay when put I it up; a practice which I condemn at present, believing that salt will be eaten, when needed, without compelling them to eat it with every mouthful of hay they eat; and besides this, I have noticed that in extreme cold weather when they had access to salt they would eat but little, and as the weather moderated they would eat much more; showing that they had a choice when to eat it—and I believe that choice should be gratified."

A little discretion in the matter of salting as well as feeding sheep and other animals, would be better than any dose administered after the evil is done.—Ed.

Cider Mill and Vegetable Cutter.

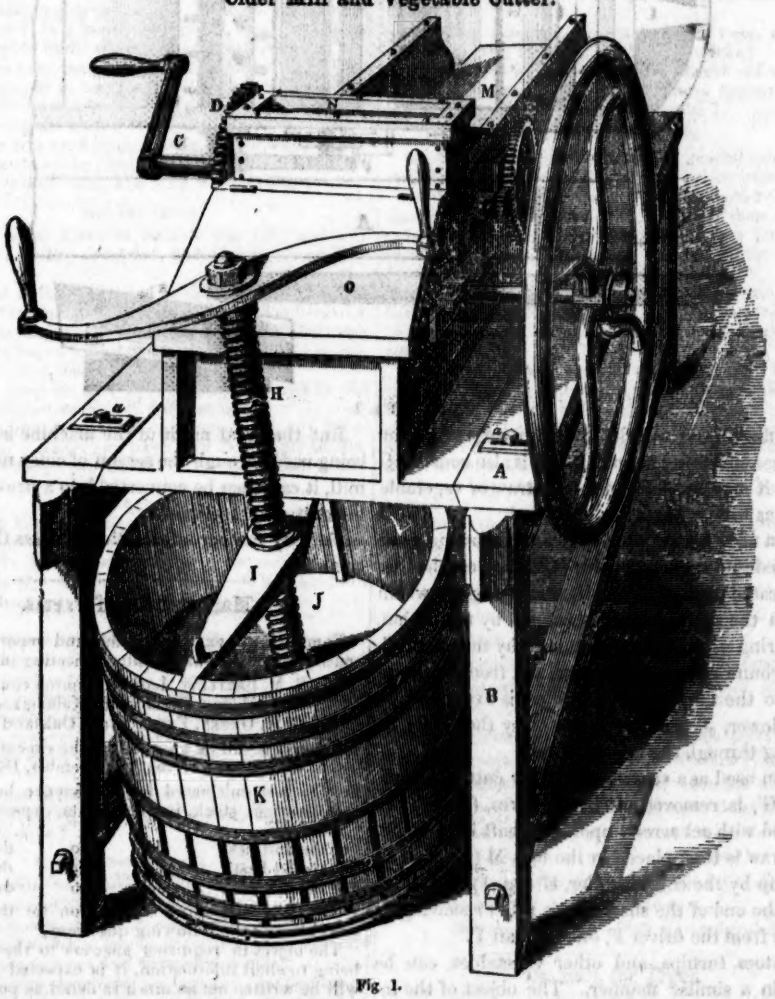
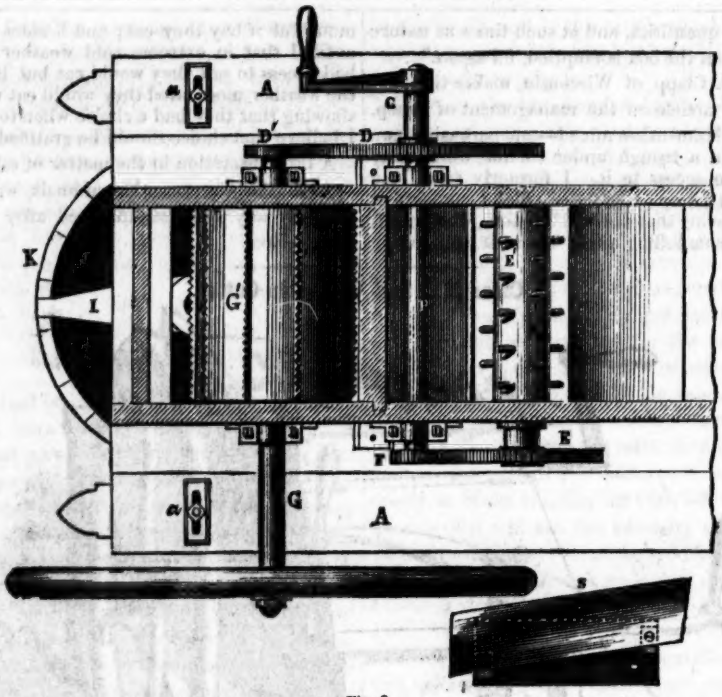


Fig. 1.

The cuts accompanying this article, exhibit in a very satisfactory manner, the representation of an ingenious combination of simple machinery into one apparatus to use for grating and crushing apples, and extracting their juice in the process of making cider, and also for cutting and slicing vegetables and hay and straw. We have not seen the implement in operation, but it certainly presents a great many points which render it of value to farmers. This machine was patented on the 26th of last July by F. B. Hunt of Richmond, Indiana, and so successful has he been since he started its manufacture that he finds it difficult to keep up with the demand for them. The following is a description of the cuts, which will give an excellent notion of the capabilities of the machine, and its design.

Figure 1 is a perspective, and figure 2 a plan view of the machine, with the castings removed. The same letters in each figure refer to corresponding parts.



Fg. 2.

This machine is, as exhibited in the engraving, for grinding and pressing apples, but it is also constructed that it may be changed into a straw or vegetable cutter, as will be hereafter described.

When used for grinding apples and pressing, fruit is poured into the hopper, N; it is then crushed by the serrated plates on the cylinder, G' (fig. 2), which is upon the shaft, G, and is rotated by the pinion, D', gearing with D, which is turned by the crank, C. The ground apples, (pummace) fall from this hopper into the tub, K, and the juice is expressed by the follower, J, forced downward by the screw, H, working through the cross-piece, I.

When used as a vegetable or straw cutter the cylinder, G', is removed, and the knives. (fig. 2,) are fastened with set screws upon the shaft in its stead. The straw is then placed in the box, M (fig. 1), and is fed up by the cogged roller, E' (fig. 1), the wheel E, on the end of the shaft of this roller receiving its motion from the driver F, on the shaft P.

Potatoes, turnips, and other vegetables, can be sliced in a similar manner. The object of the invention is to furnish a machine which shall be convertible into a variety of uses, thus saving the farmer the expense of providing several machines for these purposes. As a cider mill alone, we should consider it a convenient implement, enabling each farmer to make his own cider, instead of carting off his apples to a mill at some miles distance, and as it is portable, it can be carried readily from one orchard to another, more easily than the apples and cider carted back and forth.

But the great merit of the machine is, that after being used through the season of cider making, as a mill, it can then be converted into a straw and vegable cutter for the winter.

For any further information address the inventor as above.

Management of Farms.

Committee to examine farms and report to the executive committee at its annual meeting in December.

S. M. Bartlett, Laselle, Monroe county.
A. Y. Moore, Schoolcraft, Kalamazoo "
C. W. Green, Farmington, Oakland "

Premiums will be awarded by the executive committee, at its annual meeting, in December, 1854.

For the best cultivated farm, reference being had to cultivation, stock, improvements, expenses and products, &c.				$50 00
For the 2nd best	do	do	do	30 00
For the 3d best	do	do	do	20 00
For the 4th best	do	do	do	10 00

Any person making application for the premiums must answer the following questions.

The object in requiring answers to these questions being to elicit information, it is expected the answers will be written out as much in detail as possible.

All who furnish full answers to the questions will receive premiums in addition to the premiums offered above, consisting of the Society's Diploma, and one or two volumes of the Society's Transactions, according to the value of such reports.

SOILS, &c.

1. Of how much land does your farm consist? and how much wood, waste, and improved land respectively?

2. What is the nature of your soil and subsoil? Is there limestone in it?

3 What do you consider as the best mode of improving the different kinds of soil on your farm? of

clay, if you have it? of sandy soil, and of gravelly soil? Answer respectively.

4. What depth do you plow? What effect has deep plowing had on your various soils?

5. Have you made any experiments to test the difference in a succeeding crop, between shallow, common or deep plowing?

6 Have you used the double, or subsoil plow? and what have been its effects on different soils and crops? Have you drained any of your lands? if so, what soils, and with what results?

7. What trees and plants are indigenous to your soil? Give the name of each.

MANURES.

8 How many loads of manure (30 bushels per load) do you usually apply per acre? How do you manage your manure? Is it kept under cover, or are there cellars under your barns or stables for receiving it?

9. How is your manure applied; whether in its long or green state, or in compost? For what crops, or under what circumstances do you prefer using it, either in a fresh or rotten state?

10. Have you used lime, plaster, guano, salt, or any other substance not in common use as manure? In what manner were they used, and with what results?

TILLAGE CROPS.

11. How many acres of land do you till; and with what crops are they occupied, and how much of each crop?

12. What is the amount of seed planted or sown for each crop, the time of sowing, the mode of cultivating, and of harvesting, and the product per acre? Have any insects been found injurious to your crops? If so, describe them, and the remedies adopted.

13. How deep do you have manure covered in the earth for different crops and different soils?

14. Have your potatoes been affected with any peculiar defect or disease, and have you been able to discover any clearly proved cause for it, or found any remedy?

GRASS LANDS, &c.

15. What kind of grasses do you use? How much seed of clover or the various kinds of grass do you sow to the acre? At what season of the year do you sow? and what is the manner of seeding? What kinds of grass are best adapted to lands used for dairy purposes?

16. How many acres do you mow for hay, and what is the average product? At what stage do you cut grass, and what is your mode of making hay?

17. Is any of your mowing land unsuitable for the plow, and what is your mode of managing such land?

18. Have you reclaimed any low, bog or peat lands? What was the mode pursued, the crops raised, and what success?

19. Have you succeeded in eradicating the weeds from your farm? If so, by what methods, and what weeds are most troublesome?

DOMESTIC ANIMALS.

20. How many oxen, cows, young cattle and horses do you keep, and of what breeds are they?

21. Have you made any experiments to show the relative value of different breeds of cattle or other animals for particular purposes, and with what results?

22. What do you consider the best and cheapest manner of wintering your cattle; as to feed, watering and shelter?

23. How much butter and cheese do you make annually, from what number of cows, and what is your mode of manufacture?

24. How many sheep do you keep? Of what breed or breeds are they? How much do they yield per fleece and what does the wool bring? How many of your sheep usually produce lambs, and what number of sheep are usually reared? How much will your sheep or lambs sell for per head to the butcher.

25. What do you consider the best and cheapest manner of wintering your sheep, as to food, watering and shelter? How many in proportion to your flock (if any) do you lose during the winter?

26. How many swine do you keep, of what breed are they; how do you feed them; and at what age do you kill them, and what do they weigh when dressed?

27. What experiments have you made to show the relative value of potatoes, turnips and other root crops, compared with Indian corn, or other grain, for feeding animals, either for fattening or for milk?

FRUIT.

28. What is the number of your apple trees? Are they of natural or grafted fruit, and chiefly of what varieties?

29. What number and kind of fruit trees, exclusive of apples have you; and what are among the best of each kind.

30 What insects have attacked your trees, and what method do you use to prevent their attacks?

31. What is your general management of fruit trees?

32. What other experiments or farm operations have produced interesting or valuable results?

FENCES, BUILDINGS, &c

33. What is the number, size, and general mode of construction of your farm buildings, and their uses?

34. What kind of fences do you construct? What is the height and length of each kind, and their cost and condition? Have you constructed any wire fences? If so, what has been its cost, and what its advantages and how made?

35. To what extent are your various farming operations guided by accurate weighing and measuring? And to what degree of minuteness are they registered by daily accounts?

36. Do you keep regular farm accounts? Can you state the annual expense in improving your farm, and the income from it, with such precision that you can, at the end of the year strike an accurate balance of the debt and credit? Would not this practice conduce very much to close observation, careful farming, and in the end much improve your system, as well as better your fortune?

37. Give the annual receipts and expenditures on your farm, specifying each.

The persons making applications for premiums on farms must submit written answers to these questions, which will be furnished by the secretary, to all who may apply for them.

The statements to be forwarded to the Recording Secretary at Detroit, on or before the 1st day of December, 1854.

Persons wishing to compete for the premiums on farms must make application to the Secretary, at Detroit, by the 15th day of June, in order that the examining committee may visit them at the proper time, in accordance with the resolution of the executive committee.

Answers to the above questions will also be required to be forwarded to the secretary by the 1st of December, as heretofore. J. C. HOLMES,

Secretary Michigan State Agricultural Society.

On Salt for Trees.

MR. EDITOR:—The March number of the *Farmer* is on hand and I am pleased with the practical nature of most of the articles. This is what we want, practical experience—the result of actual experiments; and a paper destitute of this is dry to the common reader. The farmer is a practical man, and wants practical knowledge. I perceive that Mr. Tibbets of Plymouth has a mind to try salt as a remedy for worms and insects in his orchard. I

think if he applies it at the rate he mentions—ten bushels per acre, he will not be troubled with worms or fruit either. Having had a little experience in salting quinces, I can "speak from the book." True I applied brine, but that is what his salt will be after the first heavy shower.

A neighbor, a practical gardener, says that when he lived east, he was employed by a lady to destroy two apple trees, which, as she thought, deformed her flower garden. Her husband not wishing the trees removed she employed him to do it secretly. All he did was to place a little salt, perhaps a quart, near the roots of the trees, and the deed was done. They neither budded nor blossomed, nor leaved out. The gentleman had his trees examined by men who searched for worms around the roots, but none could detect the agent which had caused their death. The narrator says that when he cut down the trees to remove them he chewed some of the bark and chips, and could taste the salt distinctly.

If Mr. Tibbits salts his orchard, I hope he will let us know the result through the *Farmer*.

Deacon Marlatt of Hickville, I see, saved his green gage plums from the curculio by putting leached ashes around the trees. I would state that I had a tree of that variety which was last year accidentally surrounded by leached ashes, and that it also escaped that pest, while another tree of blue plums standing but a few rods distant, without any such protection, lost all its fruit by that insect. Whether this was owing to the variety or to the ashes, I cannot say.

Wishing the *Farmer* much success, I remain yours, &c. C. Q.

FAIRFIELD, March 1854.

[Salt when applied as brine will undoubtedly kill any plant or tree to which it may be applied, and when used in the way "Q." recounts, it will destroy vegetation. If thrust down the throats of animals in the same immoderate style, its effect, we are inclined to think, would prove similar on animal life to what it is on vegetable life. If any one doubts this let him try to swallow a quart of water in which only an ounce of salt is dissolved. Yet salt in moderate quantities is grateful to both man and beast, and undoubtedly is beneficial to vegetation. It has been applied with good effect on some lands at the rate of ten bushels to the acre, and quantities equal to four or six bushels have repeatedly been tried. Johnston, the celebrated agricultural chemist, records one instance where sixteen bushels were sown, and the difference on the crop, which was barley, was 21 bushels, the unsalted land producing but 30 bushels, and the salted 51 bushels. This was probably an extreme case; but several other instances are cited in which salt was applied to both wheat and hay crops, and the effect appeared to be to increase the crops: in the hay there was a difference from one half to a whole ton; and in the wheat from six to twelve and 14 bushels per acre. We only give these instances to show that Mr. Tibbets is not alone in his opinion about salt being beneficial to land. That he is not alone in his idea about salt having the effect of causing worms and grubs to disappear is also easily shown; and we will cite one of the best known agricultural names in the United States. In December of 1844, B. P. Johnson, the present well known Secretary of the N. Y. State Agricultural Society, wrote to the Albany *Cultivator*, that the season previous, he had found in turning up a piece of sod of about three acres, that it was infested with the wire worm and grub, he sowed a bushel and a half of fine salt per acre on it, harrowing and rolling it in before planting his seed corn. The crop was a very good one, and he says not a hill was touched by the grub, although in the field of a neighbor adjoining, who planted his in the ordinary mode, nearly one third was lost.

We do not wish it understood that we advocate the indiscriminate use of salt; but the facts are generally in favor of a benefit accruing from a moderate application of it. In fact the analysis of most plants shows that salt is composed of elements which form constituents of their composition. For instance let us take the analysis of the apple, and see what it contains that may be supplied in some degree by salt: One hundred parts of the ash of the apple analised contains,

Silica,	1.637
Phosphate of Iron,	1.593
Phosphoric acid,	13.267
Lime,	4.199
Magnesia,	1.669
Potash,	37.610
Soda,	24.799
Chlorine,	2.169
Sulphuric Acid,	7.229
Organic Matter	5.828
	100.000

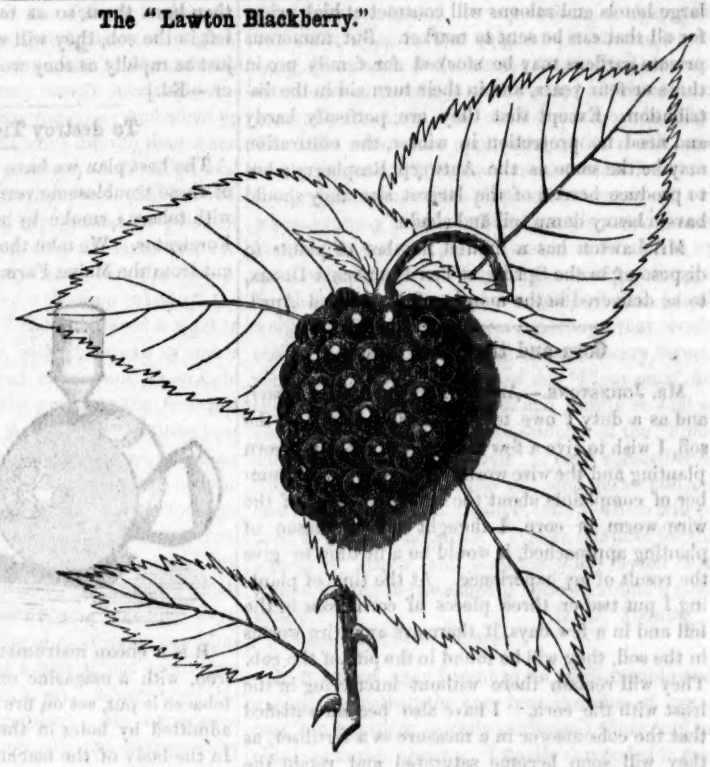
Now the analysis of fine salt such as comes to us from New York, gives the following results:

Chloride of Sodium,	97.466
Silica,	0.010
Sulphate of Lime,	1.799
Lime,	0.058
Magnesia,	0 082
	99.415

Salt it will be seen supplies in a very eminent degree soda and chlorine, the former of which forms nearly one fourth of the ash of the apple, and a supply of which must be obtained from some where, if it does not happen to be in the soil.

We are without any accurate data, or reports of any accurate experiments with salt as a manure on the soil, or in the climate of this State. Many regard it as an excellent stimulant, and useful in orchards. Others regard it as a poison, almost, and as an article deleterious and injurious to vegetation. In a soil where the element of soda is deficient, an application will prove beneficial, both as supplying that want, and also, because it is supposed to act on the constituents of the soil, and render them more easily decomposed by the roots of plants.—Ed.

The "Lawton Blackberry."



The annexed is a drawing from nature of the leaf and fruit of this valuable variety of the Blackberry, which must be elevated to at least an equality with any of the productions of the fruit garden. Its history may be given in the following extracts from the official report of the proceedings of the Farmers' Club of the American Institute, at a regular meeting held at their rooms, No. 351 Broadway, in the city of New York, August 2d, 1853.

"A splendid specimen of the blackberry was presented to the society by WM. LAWTON, ESQ., of New Rochelle. Many of the berries were from three to four inches in circumference, & a large basket of them were partaken of by the members of the Club. Mr. Lawton named the fruit the 'New Rochelle Blackberry,' but the Club changed its name to the 'Lawton Blackberry,' and tendered to him the thanks of the Association, the following paper having been read previously by Mr. Lawton."

"*This Blackberry*—to which I have before called the attention of the club—has been cultivated, in small quantities, for several years, in New Rochelle, Westchester County, where I now reside. I have not been able to ascertain who first discovered the plant, and brought it into garden culture, but am informed it was found on the road side, and from thence introduced into the neighboring gardens. As it came to me without any name to distinguish it from the 'Wild Bramble,' I beg leave to introduce it to the notice of the club as the 'New Rochelle Blackberry,' and, at the same time, present as a specimen a few quarts of the fruit, gathered this morning, precisely as they came from the bushes, without being selected. I have examined many works with a view to ascertain if there has ever been any improvement on the well known wild varieties, but without success. The '*Double Flowering*,' '*Dwarf*,' or '*Dewberry*,' '*American Upright*,' and the *White Fruited*,' are all that are named. The Dewberry is the first to ripen, and the best flavored fruit. The White Fruited seems to be cultivated more as a novelty than for the fruit. The Upright variety fruits late in the season, is of vigorous growth, and under favorable circumstances produces large mulberry shaped berries, but the seeds *are not thickly imbedded* in the pulp, and are so abundant as to impair materially the quality of the fruit. *The Blackberry seems to adhere to its original character with singular tenacity; or, from the many millions of plants which spring up from seed annually distributed in almost every diversity of climate and soil, we should constantly find new varieties. Improving the wild plant by cultivation is one thing; to produce a new variety is another. The fruit now before you I believe to be of the last named character.* It is not like the Dewberry, or long and mulberry-shaped like the Upright Blackberry, and *the seeds are so completely imbedded in a rich pulp as hardly to be noticed.* I think in shape and size they compare very well with the Hovey Seedling Strawberry.

"The 'New Rochelle Blackberry' sends up annually large and vigorous upright shoots with lateral branches, all of which, under common cultivation, will be crowded with fine fruit, a portion of which ripens daily in most seasons for six weeks, commencing about the middle of July. They are perfectly hardy, always thrifty and productive, and I have not found them liable to blight or injury by insects.

"It will be many years before our citizens generally will be able to procure this fine fruit, as our

large hotels and saloons will contract at high prices for all that can be sent to market. But numerous private gardens may be stocked for family use in three or four years, and in their turn aid in the distribution. Except that they are perfectly hardy and need no protection in winter, the cultivation may be the same as the Antwerp Raspberry; but to produce berries of the largest size they should have a heavy damp soil and shade."

Mr. Lawton has a limited number of plants to dispose of in the Spring, at TEN DOLLARS A DOZEN, to be delivered in the months of March and April.

Corn and the Wire Worm.

MR. JOHNSTONE.—As a subscriber of the *Farmer*, and as a duty I owe to my brother tillers of the soil, I wish to give a few hints on the subject of corn planting and the wire worm. Having heard a number of complaints about the destructiveness of the wire worm in corn, I thought as the season of planting approached, it would be a fit time to give the result of my experience. At the time of planting I put two or three pieces of corn cobs in the hill and in a few days, if there are any wire worms in the soil, they will be found in the pith of the cob. They will remain there without interfering in the least with the corn. I have also become satisfied that the cobs answer in a measure as a fertilizer, as they will soon become saturated and retain the moisture through the season. These worms are also destructive in wheat. Some years since, in the State of New York, I plowed for summer fallow an old timothy meadow which was of a mucky loam, and sowed it to wheat which they totally destroyed. The next year I planted the same lot with the same result; they did not leave me the seed. My neighbor who had about the same luck that I had, tried the cob as an experiment. A few days after planting he invited me into his lot, where I found on opening the hill, from one to a dozen worms in one cob.

The result was, he had a full crop of corn. I followed the example the next year with entire success on the same lot where my crop had been destroyed the year before.

Since then I and the wire worm have dissolved partnership on the corn dicker. If the remedy may prove as successful to others who may be troubled with the intruders, as it has to me, I shall feel amply rewarded for my scribbling.

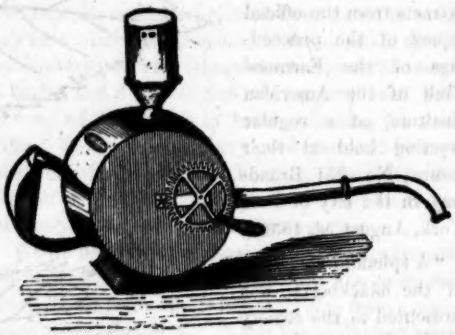
Yours truly, JOHN WORMLEY.

Marshall, March, 1854.

[This remedy for the wire worm is an excellent one, which we also found useful in a corn field that had been broken up the fall previous to planting. In addition to what Mr. Wormley says, the suggestion is thrown out, of the propriety of letting one of the boys gather the cobs at hoeing time and then burn them, so as to destroy the worms. If left in the cob, they will wax fat and increase there just as rapidly as they would if let alone altogether.—Ed.]

To destroy Ticks on Sheep.

The best plan we have read of for ridding sheep of these troublesome vermin, is to fumigate them with tobacco smoke by means of Brown's Patent Fumigator. We take the following description and cut from the Maine Farmer.



It is a cheap instrument, made of tin and sheet iron, with a magazine on the top, into which the tobacco is put, set on fire and shut up, the air being admitted by holes in the sides near the top of it. In the body of the machine is a fan, which, when turned by the crank, causes an influx of air through the holes, and thence through the burning tobacco and out of the tube in the side. By inserting this tube in the wool, you can throw in any amount of cool, dense smoke, which at once gives a quietus to any insects there. Cattle infested with lice may also be cleared of any such vermin in the same manner, and hens also,—and if your dog becomes infested with fleas, just put the nozzle of the instrument, when in full blast among his fur, and you will relieve him at once.

This little machine was originally made for fumigating greenhouses, dwellings, ships, or any other place liable to be infested with vermin. Those having house, or other plants troubled with insects will find it very useful, as tobacco smoke is as fatal to them as to ticks, and this is the most convenient way of applying it we know, and the same instrument will serve both purposes.

Carrots.

MR. EDITOR:—In perusing your valuable paper I observed remarks from some of your worthy correspondents on the culture of the carrot. As I have had considerable experience in raising and feeding them I thought a word in brief might not come amiss to some of your readers. In planting I have used a drill with not very good success as it plants the seeds in too deep, frequently gets clogged, and,

as the seeds are very small it is difficult to detect it while planting. I always found the seed a great while coming up, giving the grass and weeds the start of them, thereby very much increasing the labor and expense of raising the crop; and when up I always found them much more unoven than when sown by hand. I finally set my drill aside, and thought I would try some other way. I did so with good success. I prepared my ground (a piece of wheat stubble) by plowing deep in lands one rod wide, letting it lie for a few days for the sun to warm the soil. I harrowed well, then raked off the largest lumps by hand. I then prepared a marker similar to a corn marker, with the teeth 18 inches apart. With this I marked the ground as straight as I could and dropped the seed into the trenches by hand. I then hitched my horse to the stone boat and drew it over the ground thus sown, breaking the small lumps and covering the seeds just enough to make them vegetate quick and start before the grass and weeds. My seeds came up very even. All the time spent in preparing the ground and sowing one fourth of an acre, was one and a half days, all the time spent in weeding was four days. In the fall I gathered a fine crop of over two hundred bushels of carrots, at a cost of not more than five dollars worth of labor in all. I have tried this method since with like results. My experience has taught me that carrots are not surpassed by anything I ever tried for fattening cattle. They make the best and cheapest beef, and are also excellent for horses. ALFRED LATTA.

KALAMAZOO, March, 1854.

Corn, Oats and Potatoes.

MR. EDITOR:—Allow me through the *Farmer* to invite the attention of its readers to a new variety of corn,—not entirely new either, but new at least to the majority of our farmers. It is called the "Flour Corn," a very appropriate name as the whole substance of the grain, except the germ, is flour of the purest white and nearly of the same consistency as wheat flour. There is not a particle of that flinty substance about it that other corn has, and in this respect it is as different from all other varieties, as wheat is from oats. It is eight rowed, grows about as large as the common eight rowed varieties and yields equally as well.

The Flour corn, when properly ground, and bolted or sifted, makes the most delightful bread, cake, and puddings that ever graced the table of an American farmer, being free from that distinguishable coarseness and strong flavor which the common varieties possess. Now every farmer knows that by using corn occasionally in the room of wheat for family use, there is no despisable amount of dollars and cents saved in the course of a year, especially when wheat is worth from a dollar to a dollar and fifty cents per bushel, to say nothing of dyspepsia and other diseases that originate in the neglect of using the coarser materials for food. In the southern States corn meal is used instead of wheat flour generally because it is considered more healthy. The same rule is also applicable at the north, and would be generally carried out here were it not for the prejudice and false pride of too many of our wheat growing people. The farmer's motto should be "health and prosperity," and in order to live up to it, economy should be the governing principle, but he who would despise a loaf of corn bread, would despise the very means perhaps that would enable him to pay his honest debts. Every farmer should raise an acre or two of this "Flour corn" for the special benefit of himself and family as well as neighbors. I will send some samples of the "Flour corn, or of the "Poland oats" to each subscriber of the *Michigan Farmer* who will send me his address and three cents or a postage stamp which will be used to prepay the letter. I make this offer for the benefit of others, and shall consider myself well paid in having the pleasure of "passing round a good article." D. D. TOOKER.

NAPOLEON P. O., Jackson Co., Mich.

P. S.—Last year I went to no small trouble and expense to collect the very best varieties of potatoes for planting, (mostly seedlings,) that could be obtained in this country. I finally succeeded in getting samples of twenty different varieties, as follows: "Scotch muscovans," "Scotch greys," "English whites;" "Irish cups," "Irish dandies," "Long Island meshannocks," "Briggs N. Y. mercers" white and black, "Canada peach blows," "Pinkeyes" yellow and white, "Lady fingers," "Cow horns," "Blue noses" a variety from Missouri, three early varieties, and the "Mexican wild." I raised about 200 bushels of almost every shape and color, and every body that saw them pronounced them "beauties;" and what was very gratifying to me, *not a single rotten or diseased potato was to be found in the whole lot.* On trial at the time of digging, we could not perceive any great difference in them for the table, but for productiveness, beauty and the table combined, we found the Scotch, Irish, Long Island, and N. Y. and Mexican to be very superior. The early varieties were ripe before the 4th of July.

My "Scotch muscovans" drew the premium at our County Fair last fall, and are the premium potato of the Highland Society, Scotland. I obtained the "Mexican wilds" of J. W. Briggs, Wayne Co., N. Y., and believe they are all they are recommended to be.

I don't know, Mr. Editor, that I have any Irish blood about me, but one thing I do know—nothing suits my taste and fancy equal to a good pile of potatoes of the right sort. D. D. T.

NAPOLEON, March 5, 1854.

MICHIGAN FARMER.

ROBERT F. JOHNSTONE, EDITOR.

DETROIT, APRIL, 1854.

Are you all ready?

The month of April is one of the busiest in the year, if the weather will permit. The first work is done by the plow, and the next is the sowing of the spring grains, oats, barley, wheat, with such grass seeds as may be chosen for seeding down. In performing this work, need it be pointed out here what very poor economy it is to be sparing of seed, and how richly a single pound of seed, or extra quart, will repay its cost? A single pound of the best clover seed costs but six and a half cents; yet how many farmers, if told that they ought to put on nine or ten pounds to the acre instead of seven or eight, would declare it was only throwing the seed away; but, when they find their clover in thin spots here and there all over their field, there is no end to the reasons they will seek for as the cause of the seed not "taking good;" when the chief one is really the fact that, rather than pay a sixpence or two more per acre, they left their field to grow with only about two thirds of the seed it ought to have had. So with grass seed, an extra quart only costs about eight cents; yet, rather than put it on the field, some folks prefer to lose, for two or three years, at the rate of about half a ton of hay per acre. Recollect, that if full crops are wanted, the supply of seed put in the ground must be ample. The sooner the grain sown this month can be got in the ground the better the crop. Oats will not thrive when sown late; they do not have time to ripen.

The month of April is generally cold, and yet it is the month in which most of the young animals are brought forth. Where this occurs, need we urge the necessity of care as to both food and shelter? If the young animal gets a stunt, it takes half the summer to bring it up to where it would have been, if no check had happened to it. Lambs and ewes, cows and calves, sows and their pigs, all need attention now. Cows about to calve should have plenty of good food, if it is intended to reap the full benefit of their milk. Sows, previous to littering, ought to have scraps of flesh meat mingled with their food, as it helps to prevent them from devouring their litter, which some animals have a strong inclination to do. Cut straw is also better for their beds than long straw, as the young animals are not so likely to get lain upon. Ewes and their lambs should have shelter, and they should be well fed; the increased size of the lambs and their healthy appearance during the summer will repay it. Young heifers that are just coming on with their first calf should be carefully attended to, and milked by somebody that is aware of the importance of not having them spoiled, and half their milking properties lost. Let those who are interested in the management of poultry remember that early chickens, turkeys, and ducks all bring the early prices in the market, and that those prices are generally one third more than at any other season of the year. Above all things, let our readers remember, that all the manure in the yard has to be on the field before it can be of any use or profit.

Sanford's Seed Planter.

A few days since we were shown one of the above machines for which a Patent has been obtained. They appear well calculated for planting corn, beans and other large seeds in hills. They are made of tin, light and portable, and used by carrying in the hand like a cane, this can be altered to plant from three to six kernels in a hill at an even depth. A man can plant as much ground in a day as he can travel over, in rows at any divided distance apart.

By reference to our advertising columns it will be seen that County and Town rights are for sale.

☞ One of the last year's subscribers to the *Farmer* writes to us that he has learned so much out of it during the past twelve months, that it will take him at least twelve months more to put it all in practice, and he therefore wishes it stopped till he "catches up," when he will subscribe for another year. Such subscribers are a reliance that may be depended on at some future time. This man says, "the *Farmer* found me in a poor fix, the fences tumbling down, the barn yard full of manure, no fruit trees growing, the door yard not fenced, &c., but by the light of the *Farmer*, things now begin to look more promising; but time must be given me to put in practice what I have learned." Yet, though perfectly able, he cannot afford to do his share towards the support of the paper which he acknowledges has helped him more than twenty times its mere cost.

☞ A subscriber from Southfield makes the following inquiry: "What becomes of the surplus money that is received at the Fair, after paying the premiums and other necessary expenses?" Previous to last year, after paying the rent of office, the expenses incurred by the executive committee, the salary of the Secretary, there was no surplus. The present year there is a surplus, which forms a part of the funds of the society, and the proper care of which is the duty of the treasurer, and of the executive committee. The balance remaining after receiving the appropriation from the State was stated in the January number of the *Farmer* to be $660. It will be seen also that owing to the liber-

al premiums offered, the whole expenditures for the year, exclusive of the old debt of the society, were $6,661.98, which swallowed up nearly all the receipts from the fair.

To Clubs.—At the request of a number of friends engaged in extending our circulation, we have concluded to extend the time for closing the clubs until the first of May, so that all who desire to compete may have every opportunity to increase their lists.

☞ S. B.'s hints have been read with pleasure, and he will note that in this number we have followed his suggestions in part. Such suggestions are always useful as showing what is wanted, and they exhibit that a kindly interest is felt in our enterprise.

Lenawee County Fair.—We learn from the *Hudson "Sentinel"* that the Fair for Lenawee County, this year, is to be held at that place. Hudson is a pleasant little town on the line of the Michigan Southern Railroad, about eighteen miles southeast from Adrian. The *Sentinel* does not say when the Fair will take place.

A. F., of Saginaw, is informed that we do not know of any breeders in Rochester, N. Y., who are particularly noted for raising Shanghais. Either Prudden of Ann Arbor, or Freeman of Schoolcraft, could supply him with a choice rooster. He must recollect that "far off birds" have sometimes no finer feathers than those nearer home.

☞ We take pleasure in calling attention to the communication of D. D. Tooker, on another page, relative to new varieties of corn, oats and potatoes. Mr. Tooker offers to send some of the seed of the corn and oats to those who may apply to him by mail, and of course they will have to pay the postage, which may done in the cheapest manner by enclosing him one or two postage stamps with each application. His address is Napoleon post office, Jackson county in this State.

Rotting Turnips.—T. R. R., of Raisin, Lenawee county, wishes to know if any of his brother farmers have found that their rutabagas rotted during the past winter. He says he had seventy-five bushels which were buried in the same manner as he usually buries potatoes, and just as he covered his rutabagas last year; yet he discovered by the caving in of the covering, that they had rotted. When the holes were uncovered, he found his turnips all rotten, except about fifteen bushels around the edge of the pit. It is evident to us that the turnips had been covered up too warm at an early season, and that no air holes had been left, to let off the gas which generates from fresh gathered roots. In covering his turnips he should have left a hole in the side of the turnip pit, and filled it with a wad or wisp of straw, which he could have taken out at any time when not afraid of frost, and let the steam and gas of the turnips thus escape. Some leave a ventilator of straw in the top of their pits, but the rain and melted snow is apt to find an entrance in that way. When the ventilation is in the side, it can be covered with straw so as to shed the rain. To us the rutabagas of our correspondent seem to have rotted from being kept too warm, and some of them may not have been quite sound when put in the pit.

☞ We acknowledge the receipt of the Phrenological and Water-Cure Journals, from Messrs. Fowler & Wells, New York.

☞ Among the periodical exchanges of our own State we number, The Western Literary Cabinet, edited and published by Mrs. E. M. Sheldon, Detroit, The Michigan Journal of Education, edited by Messrs. Haven of Ann Arbor, Welch of Ypsilanti and Gregory of Detroit, published in Detroit; and the Peninsular Journal of Medicine and the Collateral Sciences, published at Ann Arbor under the editorial charge of E. Andrews, A. M., M. D., Professor in the Michigan University.

☞ The dropping of a single cypher out of Mr. Hubbard's letter published last month, made it appear that the Ascutney mountain was no hill to brag about; but its height should have been *three thousand* feet instead of *three hundred*.

The Maine Law.—Mullen, Orton & Mulligan advertise in our columns that they are about to publish a most thrilling temperance story, written by the editor of the *Cayuga Chief*. The writer is a strong advocate of total abstinence from all that intoxicates.

Correction.—In printing Mr. J. S. Tibbits' communication relative to the management of orchards in the March number, in the last paragraph, the printer made the mistake of turning the word "interlopers" into "interpolaters," a term having a very different meaning, and not applicable in the sense which the writer meant to convey to our readers. We make the correction, though it is probable most of our readers have already supplied the right word, in justice to the writer, who in writing on such subjects is not apt to make mistakes of that or any other kind.

Boston Live Stock Agent.—Among the advertisements in this number will be found that of Sanford Howard, of the Boston *Cultivator*, who in compliance with numerous requests, offers his services as an agent to purchase live stock for those who may favor him with commissions for that purpose. To those about to make purchases of choice stock, we know of not one whom we could more readily and heartily recommend than Mr. Howard. A long and intimate acquaintance with him enables us to state that there is no better judge of stock in the

country, nor is there any one in the United States more familiar with the several importations of choice animals, whether horses, cattle, sheep, or swine which have been made within the last ten years; while his probity and uprightness cannot be called in question. Those who are about to go east in search of choice animals would do well to give him a call.

☞Attention is called to the advertisement of Young Morgan, by E. H. Cressy of Troy, Oakland Co. We have had several occasions to speak of the merits of this superior animal.

☞ Our pages are so crowded with communications which refer to matters connected with the season, that we have been obliged to postpone the publication of some of Mr. Nobles rambles, even although they possess a more than usual interest. We shall make up for this in our next number.

Scott's Reprints.—The London Quarterly Review for January is received. Table of Contents. Life and Works of Gray, Humboldt's Cosmos–Siderial Astronomy, The Missions of Polynesia, M. Guizot, Religion of the Chinese Rebels, Castren's Travels among the Laps, Memoirs of King Joseph, Turkey and Russia.

The Westminster Review contains valuable papers on Constitutional Reform, Propertius and his Cotemporaries, English Religion—its origin and Present Typ s, Science at Sea, "Strikes" and "Lock-outs," Arnold's Poems, Life and Doctrine of Geoffrey St. Hilaire, England's Foreign Policy, Cotemporary Literature.

The Working Farmer.—The *Working Farmer* is a very excellent periodical, devoted to the interests of improved farming. It is conducted by Professor J. J. Mapes, of Newark, New Jersey. The *Working Farmer* contains a very large amount of information very suggestive, and very scientific in its nature. On some of the questions arising from time to time, the editor takes positions, which somewhat startle the nerves of slower going men than himself, but though often contradicted he sticks to his theory and practice. The *Working Farmer* commences a new year with the first of March, and comes out in a new dress, and with the promise of doing still better than it has done. We wish it ample success.

First Annual Report of the Board of Agriculture of Massachusetts, Boston 1854.—C. L. Flint, the Secretary of the Board of Agriculture of Massachusetts, has favored us with a copy of his report to the Legislature of Massachusetts. The Board of Agriculture was established only a year ago by law, and now forms "a state department to which is committed the charge of all the interests connected with the agriculture of the State, such as the collection of statistics, the promotion of county societies, the examination of modes of culture, the recommendation of measures that may increase the present products, or the introduction of new articles for cultivation, and also the gathering of information which shall enable it at all times to give correct statements in regard to the various crops.

This first report contains a review of the present and past condition of the agriculture of the State, and sketches the comparative rate of increase and decrease of production there has been in the several crops cultivated during the ten years from 1840 to 1850. The report is only introductory, as the department is not yet fully organized so that its own wants can be made known. One of the papers in this report is a very excellent essay on the climate of New England, which contains a great deal of information on the meteorology and the changes which have occurred or been noticed in it since the settlement of the country.

Dimick's Sheep Oil.—We call attention to the advertisement of Dimick's oil for coating the fleeces of sheep. This compound is spoken of very highly by a number who have used it on their flocks. In a letter from Dr. Webb of Pittsfield, we find it mentioned as follows: "Next after good food and shelter, you will find Dimick's Sheep Oil of primary importance in securing a good growth of wool. From my knowledge of its constituents I do not suppose it operates direct in increasing the weight of fleece. But by freeing the animal from ticks and flies which it will do, and by its alterative properties promoting a healthy condition of the skin, the oil puts it in the best condition for affording a vigorous growth of its natural production improving both fleece and animal. All will be pleased with its effects.

Yours &c., N. Webb.

We understand also that several well known woolgrowers are so well convinced of its utility, that they are giving it a trial on their flocks the present year.

☞It is said a few applications of lamp oil to warts on the teats of cows will effectually cure them. An easy remedy; try it.

Foot Rot.—Mr. W. Morgan, in the Wool Grower, has a way of curing foot rot which he gives.

"There has been much said lately of the foot rot in sheep, and as I have had it in my flock and effected a cure by a very simple method, I will state it for the benefit of your readers. I put salt between the hoofs, and rubbed them together until they were quite chafed, and then put plenty of salt between the hoofs, and the cure was certain. I have told some of my friends and they have tried the plan with the same success."

Another recipe is placing air-slacked lime in the gate-way through which animals frequently pass.

HORTICULTURAL DEPARTMENT.

S. B. NOBLE, EDITOR.

Work for the Month.

April is a busy month for the gardener. Currants and gooseberries should be pruned, the grape vine secured to the trellis; scions of trees, if not already attended to, should be trimmed sufficiently to admit air and sunshine freely among the branches. Finish transplanting shrubbery, and arrange garden beds for vegetables. Seeds of hardy plants or roots for kitchen use should be sown at intervals through the month. Peas, onions, beets, carrots, parsnips, lettuce, parsley, salsify, radishes, and spinach should be in the ground as early as possible. Cabbage, celery, cauliflower, cress, and turnips may be sown any time between the middle and last of the month. Plant early potatoes as soon as the ground is dry enough to be made mellow; beans, corn, squashes, cucumbers and melons for early use may also be planted if preparations are made to protect them from the frost, but as a general thing not much is gained by planting tender vegetables very early in the season. Cucumbers for pickles are better planted sometime during the first two weeks in June, and beets for winter use will keep better if planted about the first of the same month. New beds for asparagus should be made this month, the old ones cleared of the dead stalks, and a coating of manure forked in before the young shoots start.—(For hints on cultivating asparagus, see March No. of the Farmer.)

If you have cabbage and lettuce in hot-beds, it would be well to transplant some for early heads. Hot beds should have plenty of air and water while the weather is mild, to make the plants vigorous and healthy. Cover them well when the nights are cold.

The ground for garden beds should never be worked while wet; but as soon as it is dry enough to work light, pulverize it thoroughly before sowing. Some experienced gardeners recommend that ridges or furrows be made, running from east to west and slightly sloping some eight or ten feet or more each way; that on the northern slope should be planted lettuce, spinach, and such crops as you wish to prevent from going to seed too soon, while the southern side should be occupied by those which it is desirable to bring forward rapidly. Every part of the garden should be used in rotation. Keep the hoe busy, not only to destroy weeds but to open the soil to atmospheric influence.

In the door yard and flower garden, ornamental shrubs, vines and creepers should receive particular attention. Cut away all decayed and crooked branches, and secure well to the trellis all creeping plants and running roses.

Biennial and perennial flowering plants should be transplanted, and divided if you wish to increase them. Divide and set dahlias in pots for early flowering. See that crocuses, tulips, hyacinth, and other bulbs are properly cared for; many of them will be in flower this month.

Hardy and half hardy flower seeds may be sown early; cover them slightly and protect them from the sun when too hot.

Many green house plants that have remained dormant through the winter will now begin to grow. Water very moderately, and prune if necessary. Some plants may have grown rapidly during the winter, and would be better if shortened or headed down to promote a stocky growth. If any are affected with the green insect the best thing is fumigation with tobacco smoke. Give plants plenty of air, set them out during warm days, protect them from the sun at first, and always from chilly winds and from frosts.

The Currant.

An enquirer states that "the currant is a fruit for which he has a great liking, and he wishes to know what kind of manure is most suitable for it, and would most promote its growth?"

The great difficulty with most of the cultivators of the currant, is, that it is seldom attended to as it deserves at the proper season. A currant bush as we find them usually grown, is not a single plant by any means, it is a mass of suckers that have been allowed to spring up all around the original stock, and to grow without pruning until they attain a height of four of five feet, and finally present the appearance of masses of naked canes or sticks at the ends of which there is annually some young wood on which is borne a quantity of small bunches of small fruit, sharp and acid to the taste, and no more like the large plump well formed bunches of the properly cultivated berry, than a crab apple is to an Esopus Spitzenburgh or a Newtown Pippin.

The whole secret of growing good fruit, is pruning and manuring. The object of the grower should be to have as little old wood on his bush as possible, for if he has paid any attention to the nature of the currant, he will readily perceive that the fruit is produced by the branches which grew the year previous, all wood therefore of over a year old, except what is necessary to give the bush a good support, ought to be lopped off, and the branches trimmed back each year. And to produce choice fruit, the fruit bearing wood should also be trimmed back or pruned early in the spring before the buds start. Currant bushes also need constant attention to prevent the growth of suckers, and of sprouts where they are not wanted. There are few fruits which will better repay the use of the knife, if applied at the right time, and with some idea of the nature of the plant on which it is to be used.

The currant is easily manured: the roots being very fibrous and numerous do not straggle out far from the stem, and the application of manure is made directly to them. The best kind of compost for them is well rotted stable manure mixed with wood ashes leached or unleached. It should be applied in the spring just as soon as the bushes begin to show signs of starting to grow. To those who have time, an application of liquid manure once or twice a week until the crop begins to ripen, will prove a good investment, and it will be found to give a very vigorous growth to the bush. After the fruit is ripened and pulled, there is no need of further care until the time comes round to trim down the growth of the previous season, and to cut out the the old wood.

Mr. Barry of the *Horticulturist*, makes the following observations relative to the training and growing of this delicious and easily cultivated fruit:

By proper management, the season of currants may be greatly prolonged. For instance; for early ripening, a few plants may be trained against the south side of a garden fence. In this way they will ripen full two weeks sooner than in the open quarter. For late ripening, train on the north side of a fence such late sorts as the *Victoria* and *Prince Albert*. A new French variety, called, *La Hative*, is said to be very early, and may on this account prove valuable.

Training the currant against a wall or fence is a very simple matter. It may be done in this way: Take a young plant—say a year-old cutting—set it in its place, and when it begins to grow, rub off all shoots on the lower part of the stem, and allow only two strong shoots to remain at the top. At the end of the season the plant will be something like fig. 1. The spring following, these two shoots are shortened one-half or one-third, according to vigor, and brought down to a horizontal position, as in fig. 2. From each of these we have a certain number of young shoots, from which we select one or two to train up in a vertical direction, and one to continue the horizontal branches, as in fig. 3; all others should be rubbed off. The upright shoots should be full six inches apart. At the next pruning, these upright shoots must be shortened one-third or one-fourth, according to the vigor, to insure the production of lateral fruit-spurs; and from year to year this is repeated. It is an exceedingly simple matter, if started on the right principle.

Fig. 1.

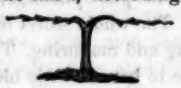


Fig. 2.

Fig. 3.

Some people may think that such regularity and precision is altogether unnecessary, and that it will answer every purpose if the branches are allowed their natural growth, and spread out against the fence or wall. The same thing is urged in regard to grape vines. We must insist upon it, however, that system and regularity are necessary in the training of all trees. Without these we can never secure that nice uniformity of growth and vigor that is absolutely essential to the well-being of all trees placed in artificial conditions.

Raising Fruit.

We have been repeatedly asked the question, "Will it pay to plant Orchards of Apples and Peaches." To this question we always reply in the affirmative. There are individuals who would engage in the cultivation of fruit, particularly apples, if they thought it would be a profitable investment of capital. The objection is often urged, that if the liquor law is sustained, it will prevent the sale of cider which has always been considered a source of profit, and in consequence the price of apples will be too low to be profitable.

Now we hope the liquor law will be sustained, either the present law or one more stringent, but it does not follow that it will not be profitable to raise apples. Apples usually made into cider, are the refuse; many are small inferior ones, and for cider are not worth over six or eight cents per bushel. Whereas good apples are worth from twelve to twenty cents for drying or shipping.

Orchards may be planted with a judicious selection of varieties, and apples raised from eight to ten cents per bushel. The facilities for pearing and coring apples by machinery, and the ovens for drying, are such that apples may be dried at a small cost compared with the expense of former years. Equal facilities are afforded for exportation so that apples may be exported at a small cost per barrel to Boston or New York and thence to Europe. Then there is the *Great West* which is fast filling up, that is dependent on us for its fruit, and will be for a half century at least, and it is more than probable that it will always be dependent. A large portion of our State is yet to be supplied by us, although we may boast of our fine fruit, and justly too, and of our thousands of trees now planted: yet all these are not sufficient to supply the home consumption for years.

Take the old settled counties, and not more than a fourth part of the eighty acre lots have a fruit tree upon them, and in each town there are two hundred and eighty-eight such lots, three fourths of which are or will be dependent on the one fourth for fruit for some time to come. In the new counties which are fast settling the demand will be increasing for years.

We recommend the very earliest, and the longest keepers as the most profitable to raise for market,

the proportion of the former should be small compared with the latter. Apples may be profitably raised for feeding stock. Horses, cattle and swine readily eat and fatten on sweet apples, or mild subacid ones. Very few fall apples need be raised where the object is mainly for market, and in gathering there will always be some too much bruised to keep, these may be dried or made into cider for culinary purposes. In making a selection for an orchard each individual should select such as in their respective neighborhood succeed well, for all apples do not grow equally well on all soils, or locations, while a few grow in all places nearly alike. The several varieties are now being tested in different parts of our State, and if the apple worm can be routed, another year will determine whether the Newtown Pippin, Northern Spy, and others will succeed in our climate.

In planting orchards the most economical method of planting and pruning should be adopted in order to raise the greatest quantity per acre with the least possible expense, and the ease with which fruit may be gathered, should always be duly considered. We feel quite confident, that apple trees need not be over sixteen feet a part each way, and so pruned that the branches will put out from one and a half to two and a half feet from the ground. Trees so planted and trimmed will bear earlier, and more abundantly, and the fruit can be gathered at about two thirds of the expense that it can be on tall, over high trees; what falls in gathering will be less likely to bruise. The practice of pruning orchards so that horses, or cattle, can walk under the limbs, we dislike, as being in bad taste and unnatural and should be abandoned.

The cultivation of peaches will be quite a lucrative business in all those locations suitable to ensure generally a crop of fruit, where the facilities are such (as it is along the line of the railroads,) that they can be sent to market and sold before they become unfit for use. Peach trees may be planted in among the apple trees and bear large crops for several years before the apples require all the ground, and at the same time an orchard of peach trees alone will be a profitable investment. We earnestly recommend the planting of a large proportion of pitts of *good peaches* only, and should the fruit be inferior which will rarely be the case, they can be budded or removed entirely and their place supplied with choice varieties. Many of our Michigan seedlings are far superior to some of the imported sorts, and a strong argument in favor of seedlings is that they will bear abundant crops of fruit in the same location where the imported varieties will scarcely bear a peach.

TRANSPLANTING EVERGREENS.—The last two weeks in March and the first two in April are said to be most favorable for removing or transplanting evergreens. The roots should be kept covered with soil or wet moss while moving, as exposure to the air is very injurious. The soil should not be pressed around the roots; a bucket or two of water thrown on will settle it sufficiently. Evergreens can be transplanted with as much safety as any other trees if the roots are properly protected from the air.

Cultivation of the Strawberry.

The greatest cause of failure in the Strawberry crop is lack of richness and depth of soil. We have frequently known persons to procure valuable plants and set them with less preparation of the ground than they would make for the cabbage plant. Then with no further attention than perhaps a slight sprinkling of manure over the bed, or an occasional hoeing out of the largest weeds, they express surprise and disappointment at the scanty and inferior yield of fruit. Another year the plants are either entirely neglected and allowed to run wild, or they are dug up and thrown away as useless cumberers of the ground. The great secret of success is to have the soil *deep* and *rich*. Examine the roots of strawberry plants grown in mellow earth and you will find that they extend to a much greater depth than would be supposed. The little fibrous roots or feeders of the plant have been known to extend to a great distance in a richly prepared soil, and the crop of fruit was five times as large and twice as handsome and good, as where the soil is only one foot deep.

In the first place in making your strawberry bed, spade the ground deep, two or three feet if possible, at all events not less than two; manure it well, and work thoroughly. The bed when finished should be a few inches higher than the garden level, it will settle even in the course of the season. To avoid the weeds that are apt to spring from fresh stable manure, some gardeners throw out the earth to the depth of two feet and fill up eight inches or a foot deep with manure mixed with litter, tread it down, and cover with the best part of the soil that had been thrown out.

Another thing to be taken into consideration is that a new strawberry bed should not be made on the ground of an old one. Any quantity of manure cannot replace the elements needful to a healthy growth, of which it has been robbed by the former plantation. In selecting plants take young runners, but be careful that they are not runners from an old and worn out bed. Runners from a fruitful bed will make fruitful plants while those from an exhausted one will often prove barren.

The most convenient form for beds is to have them three feet and a half wide with three rows in each; keep the plants free from runners by clipping, and the ground between the rows smoothly

covered with straw or spent tan bark the year round. Beds prepared in this way will bear large and fine crops for several years, while if allowed to cover the ground they are seldom of much value after the second year.

Directions for prolonging the bearing season of the strawberry may be found in the *Farmer* for February. In the January number we gave engravings and descriptions of McAvoy's superior strawberry; but few sorts as yet have excelled Hovey's seedling, and as proof of this, all the gardeners include it in the list they recommend for cultivation. Burr's Pine, and the Ohio Mammoth, and the Early Scarlet, still rank among the choicest varieties cultivated for size, and large crops, as well as for flavor. The Western Queen in some places has proved a fin variety, but we have not had experience with it in this climate.

The Garden.

Every family having a small piece of land only, should have a garden. This small plat of ground will be the most profitable portion cultivated if properly done. If not already rich, the soil should be made so. Set out currants, gooseberries, raspberries, strawberries and in proportion to its size, fruit trees. Sow and plant vegetables for early and successive crops. Let the soil be kept clear of weeds now, and an ample reward will accrue from the light labor weeding will occasion during the coming months; if the garden is properly cared for, an abundance of the comforts and many of the luxuries of life may be had at a trifling expense. Along the borders may be now set out an assortment of flowering plants which will add much to the beauty of the garden.

In sowing seeds in a garden considerable time and space may be saved by sowing beets, carrots, parsnips and vegetable oysters in alternate drills with lettuce and radishes. The two latter will be grown and pulled before the other roots will want the space. Cabbages may be set among the cucumbers, melons and squashes. Turnips may be sown early after potatoes, and among corn with success.

The Flower Garden.

The cultivation of flowers is a pleasant and cheerful occupation. An employment always innocent and instructive to the male as well as the female members of the family; it has a tendency to cultivate and cherish the finer feelings of our natures, makes home a pleasant and delightful place; and the flower garden may always afford a quiet retreat from the cares of life, where the mind becomes placid and mild, and better prepared for its duties. It matters not so much about the size and shape, if order and taste be displayed, the garden kept clean and neat, and a proper arrangement of the plants so showing that they may be seen to contrast well. The soil should be rich, fine and mellow, protected from cold and chilly winds. By a proper attention as to sorts and time of flowering a constant bloom may be kept up from April to November. The most of the annuals may be transplanted, and occupy the space of early flowering bulbs whose flowers and foliage have decayed. Seeds of hardy annuals may be sown early this month; the more tender kinds not till the ground is warm. Flowers of various colors that bloom at the same time have a fine effect when sown together. With a little taste and judgment the different shades may be made to harmonize beautifully. Or they may be sown in the form of a circle which can be made by inserting a bowl and pressing it down hard so as to make a drill. Small seeds should always be covered slightly, the earth kept moist to insure growth. Plants to make a stocky growth should be well thinned out.

Currants and Gooseberries.

Cuttings of these plants should be planted out very early this month. Place the cutting about five inches deep, press the earth firmly around the lower extremity; that part of the cutting above ground may be protected from the sun by covering slightly with saw dust. If you want standards, cut off all the buds below the surface. The roots always put out at the end of the scion. Planted in this way currants and gooseberries never throw up suckers.

Grapes.

Any person with but a very small piece of ground may have a grape vine. They are as easily cultivated as a peach or apple tree, may be trained to the side of an out house, fence or trellis. They may be cultivated by cuttings, layers and grafting. We prefer layers. If you are not provided with good cuttings, we advise you to purchase well rooted vines, which may be obtained at a small outlay; make the soil rich and mellow, and mulch it to protect it from the dry weather; train the vines as they grow, and make layers if you wish to increase. If by accident or design you cut or break a vine and it bleed, sharpen the end and stick on it a small potato and it will generally stop it. If you are to cultivate by cuttings, prepare them with three or four buds to each, plant them in a standing position, so low that the upper bud will be just below, or level with the surface. Keep the earth moist to insure success. If you wish to graft, pepare your scions and keep them properly till the sap stops flowing which will be when the leaves are fully expanded; then graft by digging around the stock that the scion may be below the surface except one bud; draw the earth up again, and the work is done.

Early Peas.

If peas for early use are not now planted, let it be done without delay. Plant in drills—cover about one and a half inches—hoe often and earth up.—Prince Albert, Early June, Early Washington and Early Marrowfat are good varieties. Plant every two weeks and you may have green peas till October.

Planting Orchards of Apple Trees.

From the London Gardeners' Chronicle.

When an orchard is to be planted, or where there are many rows, the quincunx arrangement is always the best, because by that mode, each tree is equidistant from its neighbors, and each has an equal

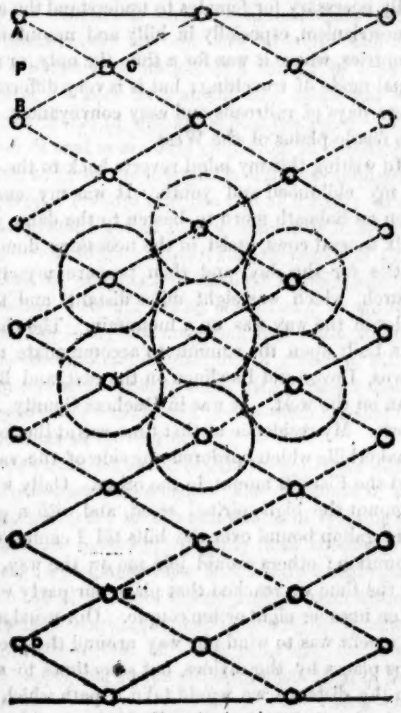


Fig. 1. Plantation in quincunx.

portion of air and light; it is also the best for lining in all directions. The rectangular mode of planting (Fig. 2) is only fit for avenues. The quincunx arrangement is based on an equilateral triangle, at each angle of which a tree is planted. To trace out on the ground the lines for a quincunx, which must not be confounded with the rhomb, we first form a base line by means of poles, or with a line; on this line pegs are fixed at the places where we intend to plant, at the distance determined on, say at 42 feet. In order to mark out the second line, we take two measures, each 42 feet long, placing the end of one of them against the first peg in the first line, as at A, and the end of the second against the second peg, B; we then bring the two measures together at the other ends, and a peg is put in at the point where they meet, at C. The three pegs thus form an equilateral triangle. This operation is repeated at the other end of the first line, and the two pegs last put in give the second line, which is then filled up like the first with pegs, 42 feet apart. The whole of the ground being thus marked out, we obtain the result shown in (fig. 1). Each tree is equi-distant from the six adjacent trees surrounding it, which can not be the case either in the rectangular or in the oblique square form.

In the quincunx mode of planting, it will sometimes happen that the distance between the rows running parallel to A D is determined; and sometimes the distance of the trees in these rows, as A B is fixed. It is necessary to know, from having one of these distances given, how to find exactly the other. We must repeat the word—exactly; for

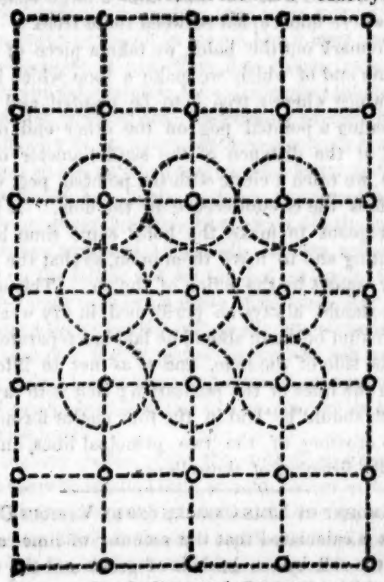


Fig. 2. Plantation in Squares.

supposing the row should contain as many as 50 trees, and the distances A B, or C P, should be only half an inch wrong, some trees, or even rows, would be two feet out of their right position. The trees could easily be placed so as to line in one direction; but this being done, it would be seen that they were, in consequence, put quite as much out of line in another direction. Stake after stake may be altered to an indefinite period, without forming correct lines, if a wrong principle has been adopted in starting. To prevent such confusion, to save time and expense, and to make sure of staking out the whole satisfactorily, the following will prove very useful.

1. The distance C P between the lines A D, C E, being given to find the distance A D between the trees in the line A D.

$$C P^2 = A B^2 - \left(\frac{A B}{2}\right)^2$$ This reduced becomes $4 C P^2 = 3 A B^2$

Hence the rule: multiply the square of the distance C P by 4 and divide the product by 3; the quotient is the square of the distance A B. Or, to the square of C P add one-third thereof; the sum is the square of A B.

1. The distance of the trees in the line A D being given to find the perpendicular distance C P between the lines A D, C E—

Multiply the square of A B by 3, and divide the product by 4; the quotient is the square of C P. Or, from the square of A B subtract one-fourth thereof, the remainder is the square of C P.

It will be readily observed from the annexed diagram, that in square planting, a tree neither is nor possibly can be at an equal distance from all those which surround it; and that when four trees grow till their branches cross each other on four opposite points, there is at the same time a large space left elsewhere unoccupied between these trees.

To mark out the holes, we take a piece of cord, at one end of which we make a loop which is put on a peg where a tree is to be planted, and then fastening a pointed peg on the other end of the line, at the distance of the semi-diameter of the hole, we trace a circle with the pointed peg, which circle is the circumference of the hole. It is advantageous to make the holes some time before planting and to leave them open, so that the earth may benefit by the action of the air. This operation should always be performed in dry weather; each kind of earth should be laid in a separate heap at the side of the hole, and so as not to interfere with the lines of the plantation; that is to say, the earth should be laid in the four angles formed by the crossing of the two principal lines, and not in the direction of those lines.

Amount of Lime Carried off by Various Crops.—It is calculated that the amount of lime carried off the soil by ten bushels of grain and the straw on which it is grown is as follows:

10 bush. Wheat and the Straw,	5.18 lbs.
10 do Rye do	6.47 "
10 do Corn do	6.14 "
10 do Barley do	4 84 "
10 do Oats do	3 87 "
10 do Field Peas do	44.74 "
2000 pounds of potatoes,	1.03 "
2000 pounds of turnips and tops,	5.92 "
2000 pounds of flax,	14.85 "
2000 pounds of red clover,	43.77 "
2000 pounds meadow hay,	22 95 "
2000 pounds of cabbages,	9.45 "

Preservation of Apples.—It is well known that if apples receive the least bruise or dent, by which they are injured, they will spoil, and also cause all the sound fruit with which they may come in contact to decay also. Mr. Pell, who exports so much of the produce of his fine orchards to England, has frequently tried the experiment of putting a bruised apple in the centre of a barrel of sound fruit, after tying a label to it. His correspondent would invariably write in answer to his inquiry relative to the effects of the unsound fruit, that the label would be found in the barrel, but the fruit was all spoiled.

LADIES' DEPARTMENT.

Equestrianism—Education of Daughters.

Mr. Editor:—I read a letter in your February number on the subject of female equestrianism; I readily agree with the sentiments there expressed, and am heartily glad that some one has the fortitude to come out and write plainly. There are many talents more deserving of cultivation among females and more worthy of premiums, than horsemanship. I agree with the writer that penmanship should be more encouraged, as it is an art which can be turned to great use for the benefit of others, and every aid of the kind seems loudly called for, in these days of improvement. The day has been when it was actually necessary for females to understand the art of equestrianism, especially in hilly and mountainous countries, where it was for a time the only, or most usual mode of travelling; but it is very different in these days of railroads and easy conveyances over the fertile plains of the West.

In writing this my mind reverts back to the days of my childhood and youth. It was my custom then on Sabbath morn to hasten to the dairy yard, milk several cows, assist in the necessary domestic duties for the day, and then prepare myself for church, which was eight miles distant, and three miles of the way was up a mountain. The church was built upon the summit to accommodate three towns, Dover and Pawlings on the east, and Beekman on the west. It was in Duchess County, New York. My residence at that time was at the foot of Quakerhill, which bordered one side of the valley, and the Fishkill mountain the other. Gaily would I mount the high spirited steed, and with a prancing gallop bound over the hills till I came to the mountain; others would join me on the way, and by the time we reached that place our party would often number eight or ten couple. Our usual mode of ascent was to wind our way around the precipitous places by the ravines, but sometimes to shorten the distance we would take a path which was made for those who went up on foot. Often we were obliged to perform feats of horsemanship, which, in these days of female timidity, would be well worthy of premiums. We had to jump our horses across gullies, made by mountain torrents in the spring of the year. We prided ourselves in these exploits, and felt as safe as if we had been in carriages on level streets, for every horse knew its rider, both having been trained together from an early age. This was in the "olden time" of forty years ago.

When we gained the lofty height of the mountain top, we could look afar off, down, down, upon hills and vales, and glistening streamlets, that wound through the wide spreading valley beneath. It was a beautiful sight, and one that will ever hold a place

in my affections. Though fortune has destined me a home in the west, my mind will often revert to those scenes, and memory will often linger there.

But I am digressing. When I commenced, the object I had in view was to say something about the domestic education of our daughters, from the cradle up to the time of their leaving us for the higher schools. I do not advocate the neglecting of their literary education, nor those requirements that are considered so necessary in this enlightened age, such as music, embroidery, drawing and imitating nature in every form, its landscapes, fruits and flowers; but I would ask my readers if domestic education has not been, and is not even now, too much neglected by the rising generation, and is not the family circle too often rendered unhappy in consequence? Domestic service is almost daily called for, and scarcely any one can be found who can take a responsible station in a family in case of sickness. Where have all the able hands and willing hearts fled to, within the past few years? One answer is that many are employed in families of wealth, to favor the inmates in a life of indulgence and ease. I would that the pen of a ready writer might be employed in such a manner as to impress upon every mother's heart the necessity of early training her daughters in the duties of the kitchen. These duties should not be made tasks, or punishments, but if rightly managed, and made suitable to the strength and dispositions of children, will be the means of furnishing them with pleasant associations of their childhood's home—such associations as these are never forgotten.

I hope some of the able pens of our State will be employed upon this subject. Let the tones of eloquence go forth; let the best modes of training our children in industry, frugality and economy be known. I feel sometimes that I have a right good will to wield the pen in this cause; then again I shrink back knowing how different my early education was from that of the present day, for I was taught according to the old fashioned times of days gone by. MRS. D.

Butter and Cheese.

MR. EDITOR:—For the benefit of your readers I will give a few of my ideas on the subject of making butter and cheese, in which I have had much practice and experience. In cold weather when I strain the milk, I pour a tea-cup of hot water in, and put only a quart in each pan. The butter properties will rise in twenty-four hours: by having so little in the pan the cream rises sooner than if there was double the quantity. I find that tin pans are the best to keep the cream from becoming rancid; it should be stirred thoroughly twice a day to let the fresh air all through it. (I was early instructed in the dairy room to make butter and cheese, but my views are very different now from what I was taught in the days of yore. It was then thought necessary to have the cream-jar stand by the fire closely covered to make it sour; and when the churning was done, there must be no water put in it nor in the butter when it was worked, for fear it would take away the rich taste.) When I commence saving cream, I put a tea-cup of sour buttermilk in the pan, and by the time it is ready to churn it will be sour enough. As soon as the butter begins to come, I rinse it down with cold water; or if the cream is cold, I mix warm water with it, and churn until it is all gathered. When I take up the butter I rinse out the buttermilk and sour lumps, for they are no addition to its flavor for me. I then put in as much salt as is needed, and work it till the water is all out. My theory and practice, is to work it sufficiently at the time it is churned, to make it into rolls or pack in jars. By letting it stand to work over the second or third time, as the custom used to be, a great deal of the flavor passes off in the air, and it loses the native sweetness it has when first taken from the churn; and furthermore, the salt dissolves into brine and is thus worked out. In packing butter I have no difficulty in preventing it from becoming rancid. As soon as it is churned and worked, I pack it down and sprinkle salt mixed with one quarter of white powdered sugar between every layer till the jar is within two inches of being full. I then spread a cloth on the butter and fill the jar with salt, after which I pour on a brine made of salt and sugar and a little saltpetre till the salt on the top of the jar is wet through. Butter packed in this way will retain its freshness a long time, and there is no danger of its becoming rancid if the salt on the top is kept wet with brine.

In making cheese, when the milk is strained at night into the tub or kettle, put the rennet in while the milk is warm, and let it stand till it comes to a curd, then cut it both ways and leave it till morning. Dip the curd carefully into the cheese basket, clean the kettle, and strain the morning's milk; add the rennet, and when it is ready to drain, dip it with the other curd and let both drain together. In this way there is no skimming nor warming the milk, and the curd is rich, being all made of an equal temperature and mixed together it is like one curd. Let it drain slowly, placing a tin pan on the top of the curd with weights in it. When ready to scald I use water instead of whey, so that if it is not all pressed out it will not taste rancid. MRS. D.

New Quilting Frames.

Our correspondent writing from near Birmingham, Oakland county, speaks of a new fashioned quilting frame which he saw at the house of Mr. Belding, and which he thinks will please the ladies and quite supercede the old fashioned ones. He compares it to a table frame two and a half feet wide by nine and a half long. Two or three inch

scantling planed eight square or round is used for the side rails. On the ends of the rails is made a round tenon one and a half inches in diameter, and one inch longer than the thickness of the end frame. At the shoulder of the rail, on one end of each a small rag-wheel made of cast iron, or thick sheet iron may be nailed to the end of the tenon. The wheel is about four inches in diameter. A small dog made of horse-shoe nail rod should be attached to the end of the frame so as to play on the rag-wheel. Along the side rails a strip of list or cloth is nailed, to which the quilt is stitched. When the quilt is put together, sew one side to the list on one rail, and roll it on so far as to fasten the other side to the other rail, and it is then ready for quilting. As fast as quilted roll it up, the dog and rag-wheel hold it in its place. This frame is light, portable, and occupies but little space, three qualities which will give it greatly the advantage over the quilting frames of the olden time. It is to be hoped that if the ladies *are* pleased with this description, their husbands will be pleased to put it to practical use, for despite the many pleasant associations that cling around those long-armed frames, their far-reaching inconvenience has been a source of no little annoyance in farm houses where elbow room is limited.

Roses and their Culture.

A door-yard without a rose bush would be almost an anomaly. In city or country if there is a window to be shaded, a foot of land beside the door-step, an old stump between whose naked roots the children have scooped mimic ovens and tigers' dens, or a gate at the end of the narrow beaten path from the front door, there the rose bush stands, giving you a fragrant welcome into the enclosure, beckoning you to a seat where once a monarch sat, bowing you over the threshhold, and peeping at you after you are in. From May till November, bending from trellis or latticed porch, clinging to, and covering with bloom and verdure the rough walls of a log cabin, glancing through palings carved in fantastic devices, or leaning their blushing cheeks against the rude rail fence:

> Now in palace gardens glowing
> When the winds of June are blowing,
> Or in darkened windows, knowing
> Scarce the lamplight from the sun,
> Roses bloom.

And yet while the rose is a general favorite, as it justly deserves to be, it is remarkable that so little general interest is manifested in the selection and cultivation of choice kinds. A few amateur florists, and here and there a farmer's wife and daughters, have ornamented their yards with some fine varieties, but too often a cluster of dwarf, untrimmed, cabbage roses choked with grass and weeds, or a scraggy cinnamon, or May rose, bristling with dry branches, and tempting the "good man" to strike it with his hoe, or to place his spade beneath its roots whenever he passes within reach of its briery arms, are the only representatives of the Queen of flowers the farm can boast. In new places and remote districts it is often difficult to obtain other than the most common kinds, but even these, with a little care and culture, may easily be made objects of admiration instead of aversion. Trim out the dead wood, remove the sod from the roots, send the children to the chip pile for some of its oldest decayed deposits, or to the woods for the rich vegetable mold that has accumulated there and place it around your roses. In trimming leave only the best formed and thriftiest shoots, and but two or three of them for each root; cut away the dead branches whenever any appear, and instead of the blighted, blackened, half blown buds clinging to an unsightly mass of brush, you will be rewarded with something worthy of bearing the name of rose—a shrub and flower which with its thrifty growth and cheerful beauty, will add another to the sweet and graceful attractions every woman should feel proud to multiply around her home.

Roses to shade a window, are often planted under the dripping eaves of the farm house, where in the leached, gravelly trench they linger out a miserable existence, trying the patience of the wife who wonders over their slow growth for a few years, and finally abandons them to utter neglect, declaring that she never could have luck in raising roses, and it is of no use to try.

Planting them in the earth thrown up in digging a cellar is no better; roses require a rich deep soil; the surface around their roots should be kept free from sod, and annually supplied with chip manure or forest mold, or a weekly pail full of the drainage of the cow house, or of soap suds. Give your roses a little attention of this kind each spring and you will have no reason to complain of your luck.

For a *specific stimulus* to make new buds and fine fresh foliage start speedily, with a rapid succession of richly colored flowers, roasted turf or half-charred sods from the lane sides, was recommended by A. J. Downing as the most perfect and successful. This is easily obtained even in the "newest settlement" where as yet the chip pile or the compost heap has not had time to grow; the children will delight to cut and burn it, and mother or sister can spend a few moments to see that it is properly applied. Leaf mold from the woods is equally good, but cannot always be procured in villages.

The cabbage rose, despite its unpoetic name, is the cottager's favorite, and with its modest color and unpretending habits is the very emblem of cheerful rural life; but for want of care it has fallen into sad disrepute with many. Its hardiness is at once the cause of its popularity and its downfall. Settlers upon new farms have little time to spare in

the cultivation of flowers or shrubbery; a few of the hardiest kinds are procured and planted and then commonly left to their fate, till through neglect they become nuisances; the children hate them as troublesome weeds and briers, the husbands scold because they are in the way and occupy room that might be more profitably used, and the wives, well, they "don't care much what becomes of them seeing that they have turned out to be so worthless, only they *do* think it is a pity if they cannot have something like a rose to keep them in mind of the old home door-yard." But they forget that years of care had been required to make the old home what it was; that a new soil must be subdued by cultivation and manuring to make it congenial to the nature of foreign plants, and care must be taken that the rank weeds more natural to the soil do not overpower them before they are thoroughly rooted and at home in their new situation. The time consumed in bestowing necessary attention upon these out of door children will not be missed from the household if rightly economized, and the increasing charms of your new home will be an ample reward.

Many perhaps are anxious to procure for their yards a few choice varieties, but, from the long lists usually given in catalogues, are perplexed in making selections suited to their means and the climate. If we were making a selection of six kinds and no more, one white, one deep red, two rose color, one yellow, and one moss rose would be deemed indispensable. Our white rose should be the *Madame Hardy*, or a white rose called *Princess de Lamballe*, both beautiful and full bloomers, or the Noisette rose called *Aimee Vibert*, rather more tender. The deep red should be the *George the Fourth*, or *Prince Albert Brennus*, or *Marjolin*. The rose colored might be *La Reine*, '*Souvenir de Malmaison*,' *Duke of Devonshire*, *Mrs. Rives*, or *Queen of Denmark*. The yellow rose should be the *Persian Yellow*. The *Mousseuse Partout* or the *Cristata* are both very excellent roses, but for sweetness do not excell the *Old Moss*. If mellow, deep, well drained and strong soil is at the roots of these roses, and if any one be not pleased with their flavor, it will be admitted that they must be hard to please.

Farmer's Clubs.

In addition to the excellent letter of our correspondent, Cora, in last number, we subjoin the following remarks from an address of unusual interest, delivered before the Agricultural Society at Northampton, Mass., by Wm. S. King, of Boston:

"It too often happens that preparation for the annual exhibition is put off until within a few weeks—and frequently a few days—of the show. The full value of the fair will not be realized by exhibitors and competitors, nor will the greatest benefits accrue to spectators and students; until the show, in the stead of being a scramble for premiums on chance-grown crops, and haply-excelled animals, shall be an exposition in the case of every exhibitor, of the results of a twelve-month's study, care and diligence. To effect this desirable end, no instrumentality can excel the FARMER'S CLUB. And of these there should be one in every town, every village, every neighborhood; alive and at work throughout the year; drilling and entrenching its members against the day of annual parade. The value of a club is not generally appreciated, or no town would long consent to be deprived of its influence." After speaking of the benefits of the self-confidence which men unaccustomed to public speaking acquire at these familiar conversational gatherings, the writer continues:

"In the next place, these occasional meetings strengthen neighborly feeling. Farmers live an entirely too secluded life; they visit little among each other, and seldom stray far from home, except to the store for groceries, or to the town-house to vote. Consequently, they lose much of that enjoyment which society affords, and unsocial (not misanthropic) habits grow upon them. To go out to spend an evening with a neighbor is a matter for a month's discussion. News travels slowly through an agricultural district; so does information. Farmers get behind the times. Now, for all those evils the Club offers a radical cure.

Thirdly, no American farmer can attend the meeting of a Club of his fellows, without receiving instruction. There is no one so well posted up in all that pertains to his profession, that his neighbor cannot enlighten him on some points, by the narration of their successes or their failures;—for a failure conveys as good a lesson as the most complete success. Failures warn us from following example, as successes incite us to imitation. Then, again, one farmer may be an oracle on stock raising, another excels in tillage crops, a third—(perhaps this third man may be a mechanic or a clergyman, who has joined the Club for the benefit of his gardenpatch or glebe)—he is wise in horticultural lore. These three Yankees cannot long occupy the same room without a barter of their intellectual commodities. The parson has swapped away a remedy against peach-borers, for an idea about raising carrots; the stock-breeder has given his friends a cure for garget, or taught them how to pop out "warbles;" in return for which he carries home a new wrinkle about orchard management, or the most economical way of draining his low lands, &c., &c.

Fourthly, the Club induces men to study and to observe with nicety, that they may have something to add to the common fund, in return for what they have received therefrom. This is human nature,—that is, the human nature of honorable men. We are not more willing that our comrades should teach us without return, than that they should feed or clothe us without pay. Then our pride spurs us on to show that we, too, have a contribution for the common stock; and if it does not happen to be on hand, we bestir ourselves to acquire it.

Fifthly, few enterprising men thus brought together once a week, or more or less often, to discuss a subject of common interest, will not long be contented with the narration of what they have done: they will cast about for new fields of exploration, or seek to enlarge the bounds of the old. Thus experiments will be suggested and agreed upon for a coming year; or a county fair will be proposed; or the foundations of other good works be firmly laid.

Sixthly, farmers, seeing the results of combined effort, will be gradually led to value it, and to employ it in all matters interesting to them as a class. One, and the only reason why the farmers of America are with-

out power, is because they have never learned to act in concert. Touch the tariff, and the whole manufacturing interest is in a ferment; meddle with the slavery question, and North and South buzz like bees and hornets; impose upon artisans, and every city swarms with remonstrating mechanics But the farmers, though numerous, are divided, and beaten in detail.

Seventhly, frequent meetings of farmers will have a tendency to wear away prejudices; which now, as a class, they rather hug. He must be an unusually obstinate individual, who long resists evidence addressed to his ears and eyes, and arguments that appeal to his pocket.

We recommend that the resolution spoken of by Cora, be adopted by all Farmer's Clubs.

ELLIOTT'S FRUIT BOOK; or, the American Fruit-Grower's Guide in Orchard and Garden. By F. R Elliott. Published in New York, by C. M. Saxton, Agricultural Book Publisher.

The cultivation of fruit is every year eliciting more and more attention in all parts of the United States, and works appear, and fade from memory as the experience of the practical men engaged in horticulture develops results from the trials of new soils, untried climates, and untested varieties of fruit. The author of this work now before us has given us a very valuable work on the cultivation of fruits. He was amply qualified to do so, having been for ten years engaged in "the nurturing of trees and noting their products." Mr. Elliott has heretofore been known principally as a contributor to horticultural journals, where his communications and papers have always ranked of importance. His experience in the west, his nursery being at Cleveland, makes his observations on fruit of especial value to orchardists at the west, as it is now conceded that many varieties which rank as first class in the vicinity of Boston, or on the Hudson river, do not prove to be more than second class when set out in the western states.

Much of that part which relates to management is taken from other works, but the mode of classification is new, and will prove useful for reference. The various kinds of fruits are separated into three divisions: First, those worthy of general cultivation; second, those not fully tested, or which appear adapted to certain localities only; third, those unworthy of cultivation. In his classification we think Mr. Elliott has been guided greatly by western experience, and we shall not be surprised to find it pretty severely criticised at the east. But, as the author promises to revise and correct his book as soon as possible, and as he speaks with due caution, and with a view to the constant improvements and changes of opinion which mark the progress of pomology, asking, at the same time, that errors may be pointed out, while he does not claim to be infallible, the book deserves attention, and the opinions advanced in it should be treated with respect, as those of one who is a sincere and earnest worker in the orchard and fruit garden. As a manual for western orchardists, we commend it to their attention.

Manure for Pears and some New Varieties.

Mr. Rivers, the well known English nursery man, has lately issued a new catalogue in which he remarks that the following compound has been found of great service in growing pears, whether they were on the pear or quince stocks. A blackish rich earth is frequently found in low marshy spots, and along the banks of creeks; this is generally considered rich, and valuable for horticultural purposes. In its fresh state such is not the case, but Mr. Rivers has found that if it is dug out and laid in a ridge, mixing it with one-eighth part of unslacked lime, and turning it two or three times for about eight weeks before it is applied, it makes a very valuable manure for pear trees, especially when they are newly transplanted; one wheel-barrow full to a tree being considered sufficient. Mr. Rivers likewise remarks that the only method of growing pears successfully in a pyramidal form, on pear stocks, is by biennial transplantation. This is a process which will not be adopted here for some time, if ever, as it is hardly suited to the climate, or to our different modes of cultivation.

Concerning this biennial removal of trees, the same writer says, it is "the most simple of all methods of root pruning; it consists in digging a trench round the tree early in November, and lifting it out of the ground, carefully, with all the earth possible attached to the roots, shortening with the knife any that are straggling." The method applies only to the dwarf pyramidal pear trees, which experience is now showing to be the most successful, and most economical method of growing fine fruit, and which is growing more in favor every day with fruit growers.

The following are the remarks of Mr. Rivers on some new pears which have been introduced the last season:

Alexandre Brivort.—First quality, second in size, flavor sugary, perfumed and exquisite. It literally melts in the mouth. January.

Belle de Noel.—First quality, second size, grows slowly. Is an excellent christmas pear, melting and rich.

Beurre Giffart.—First quality, second size. New, hardy, and one of the best early pears; succeeds as a bush on the Quince better than as a pyramid. Melting and very juicy, with a noyau flavor. August.

Duchesse de Mars.—First quality, third in size. No pear can be more high flavored and delicious. Succeeds on the quince, but requires to be double worked. December to January.

Marechal de Cour.—First in quality, first in size. A new and fine pear, which Van Mons said he considered was the best he ever raised. Forms a good pyramid on the quince. November.

Onondaga or Swan's Orange.—First in quality,

first in size. Mr. Rivers says of this new American pear, that he has found it hardier than even William's Bon Chietion. October.

Susette de Bavay.—First in quality, and third in size. A new excellent late and hardy pear; in a warm season melting; otherwise half melting but always good. Succeeds well on the quince, and proves naturally a handsome and prolific pyramid. March to May.

More about Fence Posts.

Mr. Editor.—Your Newaygo friend has evidently not read the reasons assigned many years ago for fence posts set top end down lasting longer than when set the other way. Now I have for years understood the philosophy of it to be this. It is of course well known that in the pores of all timber there are valves, and as sap ascends, these valves open, and will not allow it to descend except thro' the heart of the tree. Now in dry timber these valves work when acted upon by moisture. They open and the watery particles ascend which rots the timber. But invert the post and the valves close against the moisture and prevent it from passing up, thereby the timber is acted upon only from the outside. Put a dry post in the ground butt end down when the ground is wet, and you will see that post show the wet for several inches up as long as the earth is moist around it, but invert the post and you will see the difference at once.

As I said, I heard this reason many years ago, and have ever supposed it correct; perhaps scientific men can assign a better one. While on this subject perhaps some of your readers may be interested to know something of the durability of yellow locust for posts. In the Spring of 1815 I went to live as a clerk with John J. Glover in the city of New York. His premises fronting on Pearl street, and running back to Gold street he purchased when occupied as a tannery; and the store and house he then occupied, he told me, were built by himself thirty years before I went there, and at the same time they were built he put up a long, high ceiled fence between him and his neighbor. The posts were locust saplings from Long Island, and were faced on one side. Some were four inches through, and some were six inches. Here were thirty years certified to by the man who made the fence. I remained with him several years and every post of that fence was familiar to me. Long after Mr. G's death, I think about the year 1835, a Mr. Platt purchased the property and opened upon it what is now called Platt Place. I chanced to be there when they were digging out the said locust posts, and as I had known them for twenty years, which added to the thirty years they had been standing before I knew them, made fifty years, you may be sure I was anxious to know their condition. I took my knife and closely examined them from top to bottom, and not a particle of rot could I find on them any where. But as they were long, say two feet in the ground and eight feet above, the part exposed to the rains was worn in grooves like the old fashioned fluted stone ware, but there were no signs of decay.

Yours &c., J. R. K.

Allegan, March 1854.

A Cheap Mode of Procuring a Valuable Bone Manure.

A writer in the *Country Gentleman* says, in reference to the cultivation of the potato and successful attempts to prevent attacks of the rot: "We know a gentleman who for eight years has manured potatoes with bones fermented in ashes, has had good crops uniformly, and not one of them has rotted; but unfortunately for the conclusion to which he would have been glad to come, he has planted other potatoes, every one of these eight years, with all sorts of manures, and some without any, and neither one of these rotted, except a very few where no manure was put. The bones in the case just alluded to, were treated thus: In a large family, consuming much butchers' meat, the bones were thrown into a hogshead from day to day; ashes as taken from the fires daily were thrown upon them; enough water to keep the whole moist and to prevent the gases escaping was added from time to time, the falling rain generally being sufficient, as the hogshead was placed in the open air, away from all buildings. When one hogshead was full, another was taken. The bones treated in this way retained their form and size, but became so soft as to be easily cut through with the shovel and rubbed down with the back of the shovel into powder, with some extra ashes or dry earth. The oily matter of the bones, together with the potash of the ashes and the water thrown on becomes a saponaceous mass, and the phosphate of lime in the hardest part of the bones is diffused through the soapy mass in a state of exceedingly fine division. Bones thus fermented in ashes are exceedingly valuable for potatoes and for Indian corn, and probably for all crops. There is reason, from actual trial, to believe that the effect on the land is permanent, lasting for several years."

Remedy for Lice on Colts and Cattle.—Take white oak bark, boil in water, making a strong decoction, and wash the animal on theback and sides. In twenty-four hours the lice will be completely tanned.

Costiveness in Sheep.—This is removed by giving two table-spoonsful of castor oil every twelve hours, till the difficulty is removed; or give one ounce of Epsom salts. This may be assisted by an injection of warm, weak suds and molasses.

SWEET POTATOES.—It will be seen by the advertisement that Mr. Bodwell of Ann Arbor offers for sale sweet potato plants.

CHOICE STOCK FOR SALE—We refer our readers who are making inquiries as to where choice animals may be obtained, to the advertisement of Lewis G. Morris of Mount Fordham in New York. We have had occasion several times to notice Mr. Morris' importations during the year, and the exertions he has made to procure the purest and best bred animals in Great Britain without regard to price. Mr. Morris' and Mr. Becar at the sale of the famous herd of the Earl of Ducie, it will be recollected, purchased the highest blooded animals, at the greatest prices and bore off the choicest animals from all competitors.

The Markets.

BEEF CATTLE.—Good beef cattle appear to increase in value. At present the butchers in this place are paying $9 ₮ 100 lbs for them, and appear to be glad to get them at that price.

SHEEP.—Do not come forward freely. From $1 to $5 are paid according to quality.

CALVES AND LAMBS.—Calves sell at $4 to $5 ₮ head. But few lambs have been offered in market as yet.

HOGS.—Good carcases now sell at $5 50 to $6 00.

POULTRY. Fowls sell at high rates, and are scarce—3s 6d to 4s, and 5s being paid for them. Turkeys are worth 15 cents ₮ pounds.

EGGS—Are plenty, and bring from 9 to 10 cents per dozen when sold in quantities.

BUTTER.—Good roll bu ter now sells at 15 to 18 cents, according to quality. In firkins butter sells from 12 up to 15 cents.

CHEESE.—No country made is offered for sale. It is all Ohio or Hamburg which sells by the quantity from 9 to 11 cents ₮ lb.

FLOUR.—Flour has undergone some changes during the month. The price gradually declined till some was sold here as low as $5 87½; but for the past week it has advanced again till choice brands, known to be ground from Michigan white wheat are held at $6 50@$6 62½, nd the common brands sell at $6 25. The arrival of a Steamer has depreciated the rate again in the eastern market.

WHEAT.—This grain has also declin d till it is now sold at $1 31. There is, however, but litt'e coming into this market.

CORN.—There is a large stock of corn in store here, principally from Illinois and Indiana which sells at 60 cents ₮ bushel for shelled and 54 cents for unshelled.

OATS—May be purchased in any quantity at 34c@35c ₮ bushel.

BARLEY—Is purchased at the rate of $1 25@$1 30 ₮ 100 lbs.

BEANS.—Good first rate beans sell at $1 50 ₮ bushel.

SEEDS.—Clover of the best quality sells at $6 50 @ bushel. Timothy of prime qualities is worth $3 00 ₮ bushel; and of good but not the best at $2 50 to $2 75. Red top sells at $1 00. Fowl meadow grass $1 00. Orchard grass seed at $3 00. Kentucky blue grass $2 00. Flax seed $1 00 to $1 25.

SALT.—Fine Salt is worth $2 00 ₮ bbl. and coarse is $3 00.

PLASTER.—Fresh ground plaster at the mills $7 00 ₮ ton. Oswego p'aster $1 00 ₮ barrel.

LIME.—Fresh burned lime at the kiln 62½ cents per bbl. Water lime $1 37½ per bbl.

FEED.—Shorts sell from $15@$16 ₮ ton, and Middlings at $18 to $22.

APPLES.—Green apples are worth $3 to $4 ₮ bbl. Dried apples $1 50 ₮ bushel.

FURS.—Otter skins $3 00 to $3 50; Lynx $1 50 to $2 00; Wild Cat 3s; Grey Fox 31 cts; Mink skins 75 cts; Red Fox $1 00; Raccoon 50 to 75 cents; Deer skins 25 to 31 cents.

HIDES AND SKINS.—Green hides 5 cents ₮ lb Calf skins 10 cents Pelts are worth $2 00.

WOOL.—There is as yet no settled market for wool. Prices remain pretty much as they did at the first of the year. The feeling at present is against paying high rates.

Receipts.

For Farmer from March 3, to March 23, 1854.

A F Hayden $2; R B Hampton $7; L O Hammond $3: S T Phillips 75c; S Fowler $7,50: J Davidson $1; J A Chapman $3; J K Abbott $4; J O Pelton $7; L B Coats $4; N Smith $1; H A Armstrong $1; E Smith $1; C G White $1: O Cook $1; T M Clark $2; J B Ide $1,50; D D Bird $5; T Batelle $1; L Walker $12; E Barnum $1; A Brown $1; R B Hampton $1,50; E H Johnson $2; M Sweegles $1; W M Axford $2,25; J V Depuy $6; W G Sanford $1; F M Miles $1,50; P Sharp $3; L D Hoag $6,40; A C Tucker $1,95; G T Bingham $1; L Boyle $1; A M Robinson $5; J Sanford $1; E G Cole $1,50; Linas Cone $1; G W Kennedy $1; W R Davis $4,50; R Aldrich $1; M J Spencer $1,50; Allen Atkins $1; A Wilcox $1; J Hossie $2; P Marlatt $3,15; John Reed $1; F G Lee $1; R M Wheaton $3, T J Sumner $1; F G Lee $1; E H Johnson $13; S Ashley $2; E R Wilcox $1; G W Armstrong $3; R B Hampton $2.25; J E Martin $1; N T Elliott 75c; N Nickerson (all right) $1; B W Warren $7,50; C Quick $2,25; J H Rowe $5; F B Hunt $10; J Kelsey $3; D R Van Ness $1,30; D H Hanes $1; D S Fox $7,25; Or B Otis $1; C Sessions $5; H B Childs $9,5'; D Mills $-; H McNary $3; J L Dickinson $1; S McMath $1; E Morton $1; P H Prescott 1; E Buel $1; R B Hampton 75c; A J Dean $ 3,75.

New Book and Stationery Establishment.

KERR, DOUGHTY & LAPHAM,
PUBLISHERS AND IMPORTERS,
DETROIT, MICH.,

WOULD respectfully announce to the Book Trade in Michigan, Ohio, Indiana, Illinois, Wisconsin, and Canada West, that they have opened a Publishing and Importing Wholesale Book and Stationery House in this city, where may be found at all times a full stock of School, Miscellaneous, Law, and Theological Books, Standard Works, &c.

Also a full and complete assortment of English, French, German and American Stationery, Letter and Cap Papers, and all articles in their line, including Blank Work, Slates, Ink, &c.

From our advantages in publishing, we can procure our stock in exchanges with other publishers, and are enabled to sell at exactly Eastern prices, thus saving to our customers their freights from Eastern cities.

To Booksellers, Country Merchants, Pedlers, Colporteurs, Book Agents, and Teachers we will only say, try us, and we will satisfy all that we can furnish goods on as favorable terms as any house in the country.

KERR, DOUGHTY & LAPHAM,
jully Young Men's Hall, Jefferson ave., Detroit.

AGRICULTURAL IMPLEMENT MANUFACTORY,

Corner of Carolina and Third Streets, Buffalo, N. Y.

PITT'S PATENT SEPARATOR,

IMPROVED DOUBLE PINION HORSE POWER.

PITT'S CORN AND COB MILLS, &c.

I HEREBY give notice, that since the extension of the Patent Right on my Machine for Cleaning and Threshing Grain, I have removed to Buffalo, N. Y., where I have permanently located and erected a large establishment for the future manufacture of the above machines.

The Separator has been enlarged, improved, and rendered more permanent and durable in all its parts; while the Horse Power, for strength, durability and cheapness of repair, is not surpassed by any in the United States. This Power is warranted to withstand the full strength of eight horses; also, to give as much effective or useful power when driven by one or two horses as any other Horse Power, whether constructed on the Endless Chain or Lever principle. It was put on trial at the great exhibition of Horse Powers and Threshing Machines, at Geneva, in July, 852, where it received the N. Y. State Agricultural Society's first premium "for the best Horse Power for general purposes."

The Separator, at the same trial, also received the Society's first premium. My machines will thresh and clean from three to five hundred bushels of wheat per day, and other grain in proportion.

Two hundred of the above machines are for sale at the Agricultural Works of the Subscriber, in this city, all warranted to be a better article than can be purchased at any other shop; and if they do not on trial prove to be so, I will take them off the hands of the purchasers at the price they may pay me for them.

I further notify all persons who are purchasing Horse Powers and Separators to be used in California or Oregon, that I will hold them accountable for any infringements of the rights secured to me by Letters Patent in the above machines, as I am manufacturing a Horse Power and Separator expressly designed for that section.

All orders for the above machines hereafter addressed to John A. Pitts, Buffalo, N. Y., will receive prompt attention.

JOHN A. PITTS, Buffalo, N. Y.

The above machines are for sale at Detroit, Mich., and Fort Wayne, Indiana. June-1853

FRUIT, ORNAMENTAL TREES, &c.,

THE subscribers offer for sale this spring, a large assortment of Fruit Trees, Ornamental Trees, Shrubbery, Flowering border Plants, Roses, Bulbous Roots, Asparagus, Pie Plant, Strawberries, Raspberries, etc., upon the most reasonable terms, and they urge upon those wishing to purchase, to call upon them before purchasing elsewhere, as they feel disposed to *sell very low.* They have a large amount of Trees in a bearing state.

Also—Evergreens, of large size. They are also importing an extensive assortment of Seedling Evergreens, Nursery Stocks, Ornamental Trees, Shrubbery, Roses, &c., a portion of which will be offered to the trade.

Our Nursery is situated two miles from the City Hall, down Fort street. We are publishing a new catalogue, which will be ready for delivery soon after the first of March, and which will be supplied gratis to all post-paid applicants, enclosing a stamp, or upon application to the store of M. H. Webster, Jefferson avenue, or to the store of Hiram Walker, Woodward avenue, Detroit, and at this office.

Trees packed in the best manner and delivered in Detroit, at any place designated; no charge for delivery.

Detroit, February 8, 1853. HUBBARD & DAVIS.

BLOOMFIELD IRON WORKS.

MANUFACTURE and keep constantly on hand and for sale Aaron Smiths Michigan Jointer Subsoil Plows of different sizes, got up in the best of style, and made of the best material, well polished and of the very latest improvement, together with the best Corn Planters, Cast Iron Grain Rollers, Hand Cider Mills, with Corn Shellers attached, and a variety of other farming implements. Also is manufactured different kinds of machinery, such as Steam Engines, Turning Lathes for Wood and Iron, Self-Feeding Hand Drilling Machines, &c., &c. In fact all kinds of machinery and castings can be made on short notice, such as may be wanted in this section of country, at

A. SMITH & SON,
feb3m Iron Works in Birmingham, Michigan.

GRAND RAPIDS NURSERY.

THE subscribers offer for sale at their nursery, situated one and a fourth miles east of Grand Rapids city, a large and extensive assortment of

CHOICE FRUIT TREES.

Embracing Apple, Pear, Peach, Plum, Cherry, Quince, Gooseberry, Raspberry, Strawberry and Currants, of suitable size for transplantation: also a good assortment of

ORNAMENTAL TREES.

Mountain Ash, Horse Chestnut, Ailanthus, Willows and Altheas: also a very general assortment of ornamental shrubbery, vines and creepers, Bulbous flowering roots, perennial flowering plants and

DOUBLE DAHLIAS!

all of which are offered on the most favorable terms. Their grounds embrace ten acres, and contain over one hundred and ten thousand trees of different ages. They intend to add every new and really desirable article from time to time to answer all calls. Orders promptly attended to, and trees packed to be conveyed any distance with safety.

BARKER & SMITH.
Grand Rapids, Jan. 3, 1854. feb3m

BOOKS AND STATIONERY.

RICHMONDS & BACKUS would call the attention of their friends and the public to their large and well selected stock of

BOOKS AND STATIONERY,

which have been selected with great care, both as to quality and price, which we now offer at as low rates as can be sold in this market.

Our stock of paper is very large, enabling us to furnish Counties and Banks, Merchants and Shippers, Lawyers and Doctors, Mechanics and Farmers, with every style of Paper and Blank Books required to conduct their respective business.

We have increased our material and facilities for binding Music, Periodicals, Miscellaneous and Old Books. All work done promptly, and with neatness surpassed by none.

RICHMONDS & BACKUS.
Desnoyers' block, cor. Jefferson ave. and Bates st.
jan1853-1y

ANN ARBOR PAPER MILL.

LUND & CHAPIN, manufacturers of Book, Printing Wrapping Paper. Paper of any size and weight made to order on short notice. All orders will receive prompt attention.

J. H. LUND.—Ann Arbor, Feb. 9, 1853.—1y C. A. CHAPIN.

NEW YORK CHEAP JEWELRY STORE.

NO. 55 WOODWARD AVENUE, DETROIT.

L. P. DURKEE & CO., successors to (H. B. Marsh,) wholesale and retail dealers in

WATCHES, CLOCKS, JEWELRY & FANCY GOODS,

have just received and opened, a splendid assortment of Gold and Silver Watches, Silver Ware, Jewelry, Clocks and Fancy Goods, which will be sold cheaper than the cheapest.

☞ Watches and Clocks repaired and warranted. Mar'53-1y

"NO WAR, NOR BATTLE SOUND!"

BUT PENSIONS, BOUNTY LANDS, &C.

ALL widows of ALL officers, and ALL soldiers of the Revolutionary war, are (by an act of Congress, approved Feb. 3, 1853,) entitled to a pension "for life" of the same amount their husbands drew or would have drawn had they applied. Heretofore, none were entitled only those married previous to January, 800. Widows and orphans who have drawn FIVE YEARS' PENSION, under Act of July 4, 1836, July 21, 1848, and Feb. 22, 1849, are entitled to "FIVE YEARS' ADDITIONAL PENSION." And all widows and orphans (under 16) who have lost a husband or father in any war since 1790, are entitled to five years' pension (if not received.) Every officer and soldier who has at any time been wounded, or in any way disabled, in the service of the U. S., and in the line of his duty, is entitled to Pension for Life, according to the degree of his disability.

BOUNTY LANDS.—Every officer and soldier who have served as long as "ONE MONTH" in any war of the U. S. since 1790, is now entitled to land, if he has not received it.

Applications for Pensions, Land, or pay of any kind, will receive prompt attention by application by letter or in person to

DAVID PRESTON & CO., Detroit, Mich.

P. S. We BUY and SELL 160, 80, and 40-acre warrants, and pay best rates. ap'53 1y